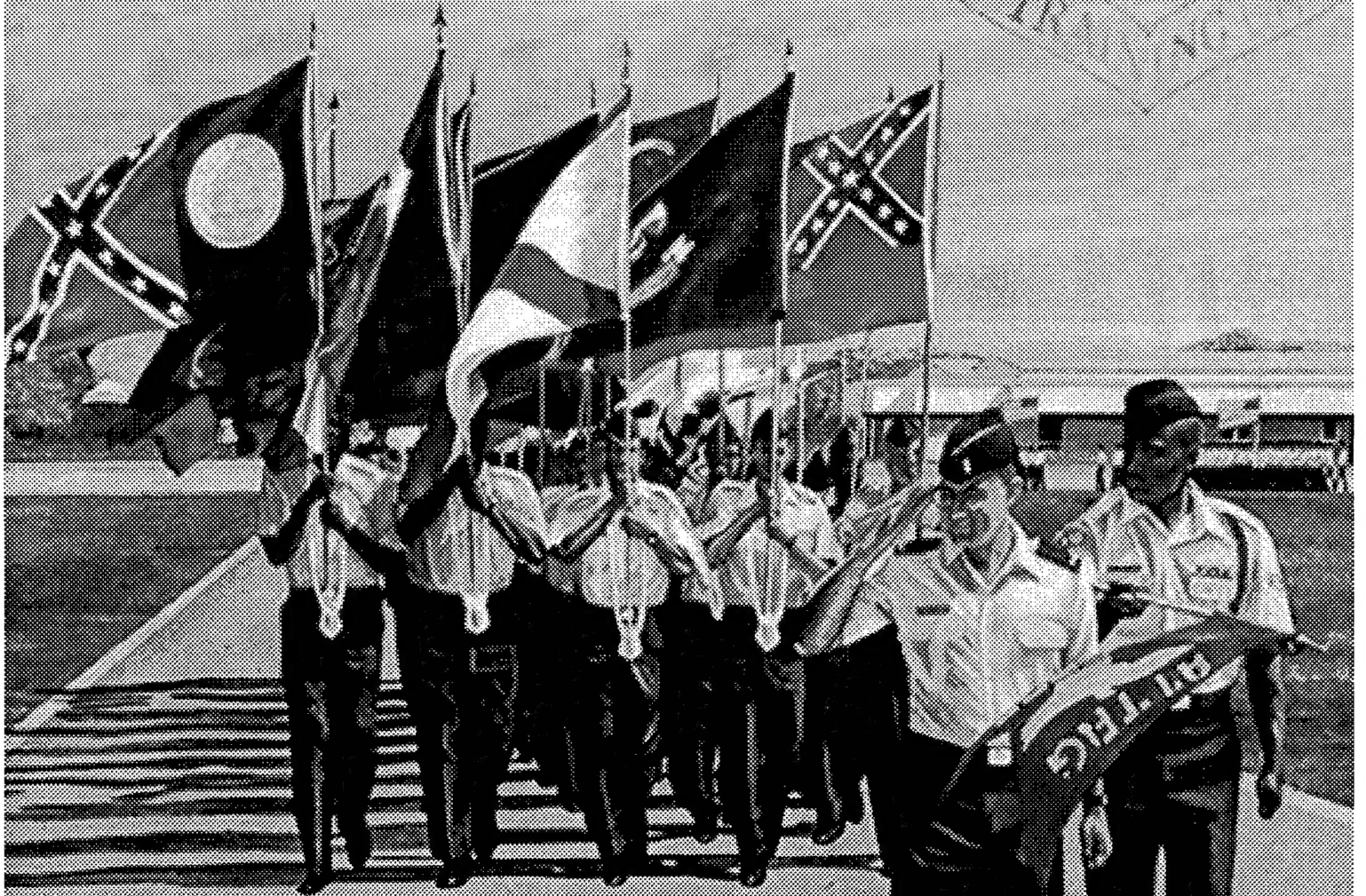


July 1999

intercom



Communications
& Information training
at Keesler AFB

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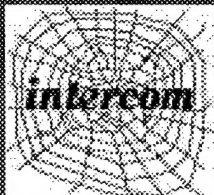
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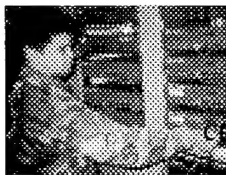
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Comm & Info instructors

*Laying the foundation, teaching skills
to meet challenges of EAF*

By Lt. Gen. William Donahue
*Air Force Communications
and Information Center Commander*

I've always hated the old saying "those who can, do, and those who can't, teach." In reality, it's more like "those who can—pass it on." The only way to improve our career field is for the best of our communications and information people to pass on that excellence by teaching at our premier comm and info schools.

Our instructors at Keesler Air Force Base are there because they are the best at what they do. They are laying the foundation and teaching the skills our airmen need to meet the challenges of the expeditionary aerospace force. There are plenty of things that are important in our career field, and instructor duty is at the top of the list.

What better way to leave your mark in our career field than by molding the minds of those who will come after you. The students are tomorrow's leaders and our instructors will have an impact on them and the Air Force for the next 30 years—it's a lasting impact.

Instructor duty carries an awesome responsibility. To meet all the needs of the warfighters—providing the right information, at the right time, in the right format—requires a highly trained, highly educated and highly motivated force, a force that can address a broad range of comm and info activities.

Our instructors must provide our young troops with the technical skills they need, then enhance their ability, through motivation, to solve problems that aren't yet defined. We must provide them the tools to think independently and creatively in an age of rapidly changing information technology.

We also must provide them the skills to work within a team—not only the Air Force team, but also within joint and combined forces teams.

We are working hard to foster career progression for instructors and provide advancement and career opportunities for those who do well. It's important that we take care of our instructors so we can continue to have the best and brightest shaping our force.

As the senior Keesler technical instructor alumni on active duty, I can tell you from personal experience that instructor duty is a pretty good path to a full and successful career. I was an instructor at the basic communications-electronics officer course at Keesler Air Force Base in the early '70s and I had a full, challenging, and rewarding experience in the Keesler schoolhouse.

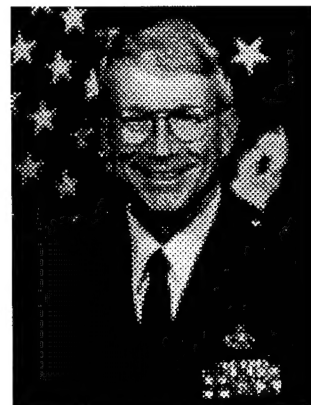
I encourage people to explore the possibilities of instructor duty at Keesler. It's rewarding and challenging—an opportunity to serve as a teacher, mentor, role model and cheerleader for a new generation of comm and info professionals. There are great jobs and great opportunities for those who will share their expertise to build and shape tomorrow's Air Force.

While technology changes, one thing will remain constant—the quality people that define our Air Force. We need the best of our career field to train the highest caliber force possible.

Wherever their assignments take them, it is the dedication and professionalism we instill in our students that will keep us the premier aerospace force that we are.

In the pages that follow, you'll read about the latest events in the academic flights at Keesler and learn about the future of comm and info training. You'll get a look at instructor duty first hand from folks who are meeting that challenge right now. You'll see how the information management transformation, the aerospace expeditionary force concept, advanced academic degrees, and career field mergers are affecting training at our schoolhouses.

If you're offered the chance to be an instructor, grab it, and make a difference. It will prove to be one of the most satisfying assignments of your Air Force career.



Lt. Gen. William Donahue

"There are plenty of things that are important in our career field, and instructor duty is at the top of the list."

Lt. Gen. William Donahue

Keesler Air Force Base: Training for the 21st century EAF

By Brig. Gen. John Spiegel
81st Training Wing Commander
Keesler AFB, Miss.

Keesler Air Force Base is the home of the 81st Training Wing—the communications, electronics, and weather training center of the United States Air Force. Under the direction of Headquarters 2nd Air Force, we're one of the largest training bases in the Air Force. Located in Biloxi, Miss., Keesler has been a major training center for the Air Force from its inception in June of 1941.

During World War II, more than 142,000 aircraft mechanics and 336,000 recruits received training at the installation, and since its first class graduated in February 1942, Keesler has turned out nearly two million students.

Today, Keesler trains 33,000 students annually in a large variety of fields, primarily in communications specialties as well as in electronics, avionics maintenance, radio and radar systems maintenance, air traffic control, and command and control systems. Course length ranges from one week to a year with approximately 1,000 military and civilian instructors teaching an average daily student load of 4,338 students in more than 540 available courses. Keesler is also home to all weather training and spectrum management training for the Air Force, Navy, Marine Corps, and Coast Guard personnel.

We are well under way with a \$123 million project, Triangle Vision, that replaces 10 aging student dormitories with seven, state-of-the-art facilities, adds a training support facility, and an additional dining hall all within a campus setting. Training Vision is our next project which aims to construct a four-building training complex phased over several years. These smaller, more efficient buildings would replace the current aging training facilities from the 1950s era.

Today, our primary educational concentration is on high-technology training, which involves a great portion of our communications and information specialties. Of the six training squadrons in the 81st Training Group, three have courses that deal with communications and information specialties.

The 333rd Training Squadron, led by Lt. Col. Don Greiman, is the center of communications and information training at Keesler with more than 8,500 enlisted and officer students receiving training each year in many specialties such as computer networking, computer programming, communications operations, and many others. Right now, they are the only squadron

totally comprised of communications specialties.

The 335th Training Squadron, led by Lt. Col. Kevin Boggs, offers personnel training, command and control training, as well as communications and information training. The 335th TRS produces more than 3,600 students a year in information management, radio systems communication, spectrum management, postal, and visual information courses.

Finally, the 336th Training Squadron, led by Lt. Col. Timothy Smith, offers training in metrology, airborne warning and control system, and computer maintenance. Each year their computer maintenance flight trains close to 600 technicians on the maintenance of large computer systems, computer switching systems, and a wide variety of peripheral devices.

We've seen major changes in the field of communications and that has generated significant increases in both the number of trainees, and the number of courses being trained here at Keesler.

Along with these course changes, the 81st TG is reorganizing its training squadrons so that courses are functionally grouped. By October, this reorganization will consolidate all the communication and information courses into the 333rd and 336th training squadrons.

We are now in the "Information Age" where superiority at handling information will be the driving force for success. The men and women who teach our communications and information courses are at the tip of the spear, leading the charge in attaining the Air Force's core competency of information superiority. In fact, the high concentration of communications and information courses and the information technology needed to support them give Keesler the look and feel of a "Silicon Valley."

Our instructors play a vital role in ensuring the best training is given to help prepare our warfighters for the 21st century's Expeditionary Aerospace Force. Instructors in the 333rd TRS, 335th TRS, and the 336th TRS are the very best at what they do. I take great pride in recognizing them for their superior performance!



Brig. Gen. Spiegel

333rd Training Squadron is the heart of comm & info training

By Lt. Col. Don Greiman
333rd Training Squadron Commander
Keesler AFB, Miss.

In many ways the 333rd Training Squadron at Keesler Air Force Base on Mississippi's Gulf Coast touches the lives of most communications and information professionals in the Air Force. You could say that they serve as the heart, pumping new and advanced skills into our communications and information warfighters.

The 333rd TRS is the premier training center for military communications and information specialties. More than 300 permanent party personnel in four flights teach 57 different resident and mobile communications and information courses to more than 8,500 enlisted and officer students a year. Curriculum developers in the qualification training flight write, publish and maintain more than 250 exportable on-the-job training and qualification packages for over 50,000 active duty, Reserve and Guard customers.

The Air Force communications and information officer training flight, A Flight, provides three types of training: basic communications and information officer training (BCOT), advanced communications and information officer training (ACOT), and the Scope Eagle Seminar.

The BCOT course teaches the leadership and operational skills required to lead the world's most respected communications and information warriors. BCOT is 13 weeks with about 17 classes graduating each year.

BCOT students are active duty second lieutenants through captains, ANG/AFRC second lieutenants through majors, DOD civilians from GS-07 through GS-11, and international officers from lieutenant through colonel. Attendees typically have from three months to 10 years of experience. Officers in the communications engineering shred-out remain for an additional five weeks of intensive training in engineering concepts. BCOT course graduates are awarded the communication and information basic AFSC.

ACOT's target audience includes senior captains through junior majors and civilians GS-11 through GS-14. Their mission is to prepare students for their next level of assignment. ACOT is not an AFSC-awarding course. ACOT refines the leadership and operational

skills learned in BCOT as well as those gained on the job by providing a rich cross-flow of information among students and faculty.

Scope Eagle provides a five-day forum for senior officers and civilians to discuss issues of corporate concern. Five times a year, 18-20 attendees are briefed by HQ USAF/SC, the MAJCOM SCs, AFCA and other leaders in the Air Force and civilian industry covering the latest issues and policies of interest to the communications and information community.

In a recent interview, Maj. David DeLoach, A Flight commander, discussed the flight's future direction, changes in the career field and technology, and the new ideas about officer training and development which drove the senior leaders' decision to change the course training objectives.

"We held a utilization and training workshop in May 1998 and convened a first-ever O-6 Steering Group (similar to a board of visitors for a college) to review the proposed objectives in June 1998," said DeLoach. "When we got final approval of the course training objectives in late August we began the BCOT and ACOT rewrites, and the O-6 Steering Group met again in early December to review the proposed new courses."

The Steering Group identified minor modifications, and the 333rd TRS developed the courses with the new guidance. "The new courses are on line and we've just begun to collect feedback from our students and the field," he added. "We'll host another O-6 Steering Group meeting in June 1999 where the members will be able to see how the new courses are doing and provide additional oversight and feedback. Our challenge is to anticipate the operational and technological changes ahead of us and produce graduates who can implement those changes."

The mission of B Flight is to develop and conduct state-of-the-art training on basic C4I systems for joint warfighters through resident and mobile courses. Led by Maj. Martha Shaffer, the flight's 83 instructors teach more than 10 resident and mobile communications and information courses to 2,500 Department of Defense enlisted, civilian, and international students every year.

B Flight courses include apprentice communica



See 333rd Page 6

tions-computer systems (C-CS) programming systems specialist, advanced C-CS programming systems specialist, apprentice C-CS planning & implementation management, advanced C-CS planning & implementation management, apprentice C-CS operations systems specialist, advanced C-CS operations systems specialist, apprentice C-CS systems network specialist, apprentice C-CS control, C-CS control craftsman, and AN/TSQ-111 communications nodal control element.

A major focus of Lt. Gen. William Donahue's efforts to operationalize and professionalize the networks (OPTN) is the first phase of the merger between the 3C0X1 apprentice C-CS operations systems specialist course and the apprentice 3C2X1 C-CS control course scheduled for the fall of this year. Course personnel in the C-CS control course, better known as the tech control course, have been working diligently on projects to meet the demands of technology growth and the challenges of bringing the new course on line.

The tech control course recently received an AETC enhanced training technology applications program award of \$92K to implement asynchronous transfer mode into their courses. This will provide wide area network technology and will also generate cost savings of \$1.5 million. The proactive efforts of Master Sgt. James Head, tech control course instructor supervisor, along with instructors Tech. Sgt. Donald Moran and Staff Sgt. Darin Hoffman, were key to these significant improvements to the course's networking infrastructures that substantially enhanced the training students receive.

The tech control course also led an equipment acquisition effort, which resulted in upgrades that brought classes in line with equipment used in the field and compliance with Y2K requirements. The flight acquired \$800,000 to overhaul LAN/WAN blocks with CISCO routers, switches, and IDNX/Promina gear. Upon completion, the course will be able to provide near-mission ready technicians to the field. Key players in this effort were Head, Moran, Tech. Sgt. Richard Hager, Staff Sgt. Charles Cox, Staff Sgt. Martin Sterling, and Hoffman.

Finally, the tech control course participated in a joint effort to build a fault isolation lab. The impact reutilized resources in excess of \$2.5 million. Using hardware installed by the 738th Engineering Installation Squadron, staff members were able to activate a functional systems control facility and network control facility for the fault isolation block of instruction. The fault isolation lab now allows instructors to provide real-world training using current technology. Again, leading this effort was Head and Cox.

The mission of the C Flight is to develop and conduct state-of-the-art supplemental training on advanced C4I systems for joint warfighters through resi-

dent and mobile courses. Capt. Jeffery Holifield, C flight commander, leads a flight consisting of more than 100 permanent party personnel supporting more than 35 resident and mobile communications and information courses to more than 6,000 DOD enlisted, officers, and civilian students annually.

Courses include advanced network technology support, ground combat communication systems, info systems management, NSA Comms, theater deployable communications, defense messaging system, and system network support.

DMS training was developed over a four-month period and the 333rd TRS was the first unit in DOD to stand up a DMS training course. DMS instructors saved more than \$100,000 in contractor costs by completing the wiring and configuration of four classrooms themselves. Key players in this successful effort were Tech. Sgts. Matthew McHugh, Anthony Percy, James Ehinger, Staff Sgts. Henry Wurslin, David Gimpel and James Calvin.

The DMS training element continues to be at the forefront of DMS systems administration training. In fact, they were invited by Headquarters Air Combat Command to participate in Combat Challenge '98, held at Tinker AFB, Okla., to provide just-in-time training to more than 125 Combat Challenge participants on the latest version of DMS. Their primary mission was to demonstrate the DMS deployed concept of operations. The instructors provided initial and refresher training to deployed system administrator personnel on the newest version of DMS. Participating instructors were Tech. Sgt. Richard A. Rogers, Staff Sgts. James Calvin, Gimpel, and Wurslin.

Another part of the 333rd TRS is Q Flight or the qualification training flight. Chief Master Sgt. Michael McCann leads the only organization of its kind to produce exportable training products that guide qualification and on-the-job training for communications and information professionals throughout the Air Force. Q Flight products focus on actual "hands-on" task performance training designed to qualify an airman in a specific duty position.

This highly motivated flight consists entirely of enlisted personnel who are specialists in their respective career fields. They are responsible for developing written training packages and interactive courseware which are available on the internet and through quarterly CD-ROM distribution. If there's a need for larger, more graphic intensive interactive courseware they can be ordered on individual CD-ROMs through the Q Flight web site (<http://www.keesler.af.mil/333trs/qflight/welcome.html>). They are also developing a simplified, programmer-free ICW template to allow interactive courseware development by any curriculum developer.

Interactive courseware using this template will in

333rd TRS to stand up theater deployable communications/ integrated communications access package

By Dave Duggins
333rd Training Squadron
Keesler AFB, Miss.

The 333rd Training Squadron has once again faced and answered yet another challenge. The theater deployable communications/integrated communications access package will be stood up and instruction will begin this fall -- one year ahead of the scheduled implementation date.

TDC/ICAP consists of 19 modular communications integrated packages performing access, switching, multiplexing, transmission, command and control systems security, and network management which can be interconnected to create a larger interoperable infrastructure. The system will be deployed identically to the communications services as in-garrison and the equipment is housed in transit cases so one plane can carry

deliver an entire TDC/ICAP suite.

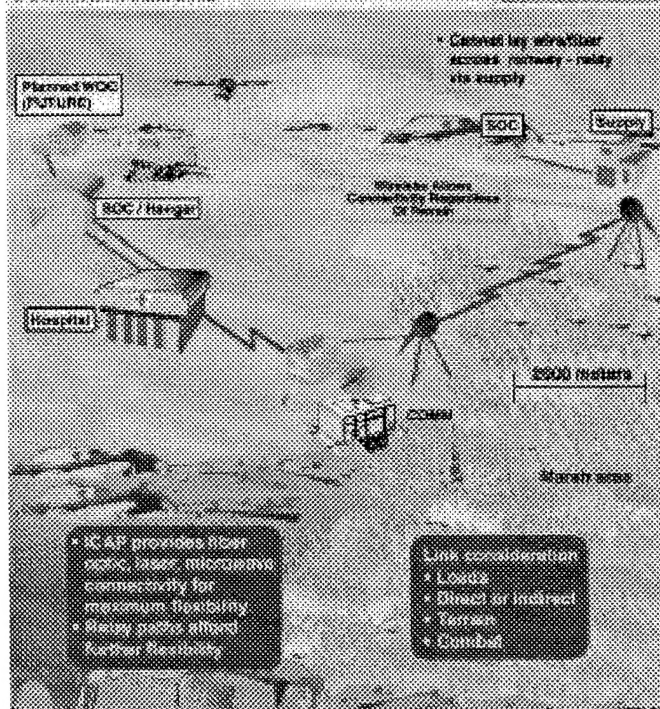
The 333rd TRS serves as the armed forces leader in delivering the training that brings state-of-the-art communications systems to the battlefield. The current Air Force training plan will save \$1.3 million per year over the use of proposed contractor training. More than 400 Air Force personnel are slated for training every year, starting in the fall, on deployable ground command and control communications.

TDC/ICAP provides the Air Expeditionary Wings, special operations units, and combat communications units with flexible, lightweight, secure, modular, and integrated deployable communications.

Dynamic leadership in the TDC/ICAP training arena is one more example of the support for the communications and information warrior by the 333rd TRS -- training the world's most respected Air Force, one student at a time.

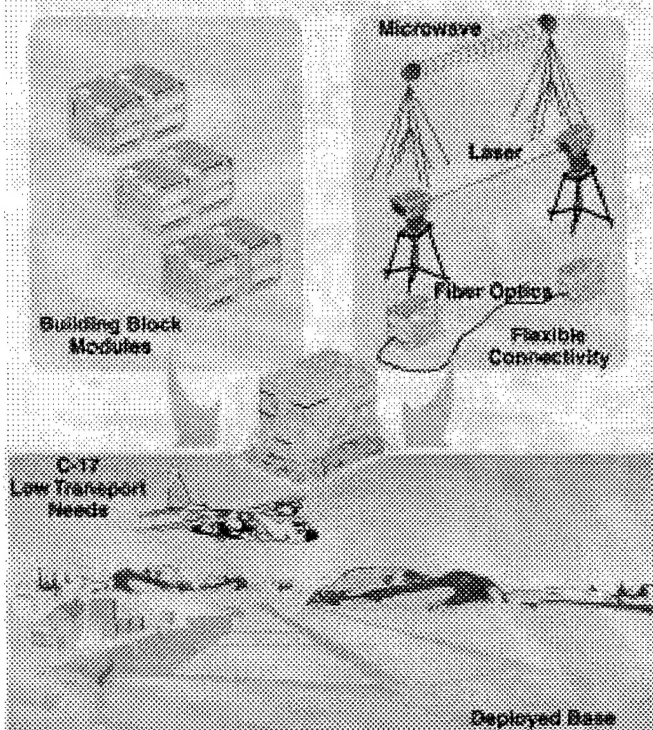
DEPLOYED BASE CONNECTIVITY PLANNING...

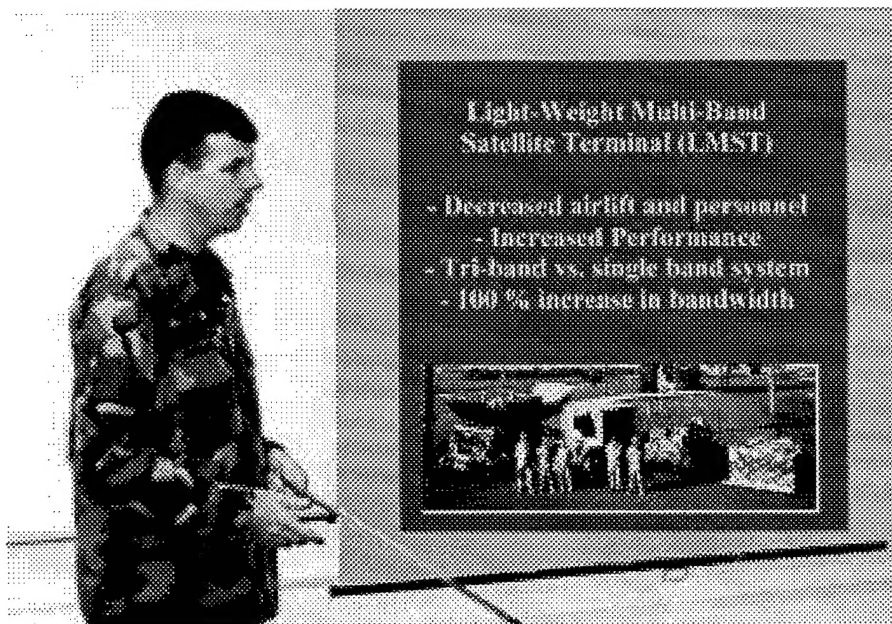
Connectivity constraints will determine requirements for inter-node communications



SUMMARY...

TDC/ICAP building-block architecture simplifies the planning process and actual deployment and operations





Basic Comm Officer Instructor Lt. Derek Gabbard briefs on Theater Deployable Communications systems.

Aerospace Expeditionary Force concepts enter the classroom

By Staff Sgt. Leonard Finnie
333rd Training Squadron
Keesler AFB, Miss.

In this rapidly changing world of military tactics and doctrine, foundations are being laid today at the lowest level, so that all will understand the nature of future warfare. The Air Force is undergoing radical changes in the way it will wage warfare.

Lt. Derek Gabbard, 333rd Training Squadron instructor, knows exactly how dynamic these changes can be. He is currently participating as a member of the Expeditionary Aerospace Force communications working group for the Air Force.

The working group meets every couple of months to discuss the current state of and recent changes to the EAF, Air Expeditionary Force, and Air Expeditionary Wing. His efforts don't stop there, he is spearheading efforts to incorporate AEF

concepts into the courses taught within the 81st Training Group.

Gabbard attended the AEF conference at Mountain Home AFB, Idaho, and gained valuable insight into EAF scheduling, communications architectures, manning and management issues, and systems design and testing.

Gabbard immediately put this new knowledge to good use by actively briefing at squadron commander's calls and sharing information with course instructors throughout the training group.

He would like to start an EAF consortium to share up-to-the-minute changes in concepts electronically. Gabbard is not alone in trying to bring the latest information on the evolving EAF down to the individual warfighter. These concepts are being shown to all non-prior service students in the training group via a videotape developed by BCOT course director Maj. Jeffery Maxwell.

Just in time training meets warfighters' needs

Staff Sgt. Leonard Finnie
333rd Training Squadron
Keesler AFB, Miss.

Communicators in the 333rd Training Squadron are going TDY to meet immediate training needs of the warfighter in the field—it is called just in time training.

One example of the just in time training conducted by Keesler personnel is meeting the Army's need and supporting the joint services warfighter.

A request was received from the 3rd Army Armed Forces Central Command. The urgent training request for a Mobile Training Team to conduct then Global Command and Control Systems user intro course was sent from Commanding General 3rd Army, who had mandated that mass numbers of 3rd Army personnel be trained immediately.

The 3rd Army agreed to fund all expenses. The request was received and an MTT was dispatched from Keesler within two weeks. The first class was taught on location and the MTT members determined the best solution would be to train the rest of the classes at Keesler. The remaining requirements were taught using Keesler's facilities and equipment. The flight saved TDY funds for the units who needed the training by sending an instructor to the students versus sending full classes of students to the school house.

The GCCS flight sends MTTs to a variety of locations throughout the world. They have trained personnel in Saudi Arabia, England, Germany, Korea, Japan, and Hawaii.

Advanced Academic Degree program enhances comm & info officer training

By Lt. Brian Thomas
333rd Training Squadron
Keesler AFB, Miss.

Capt. Richard Janoso normally likes to arrive at McClelland Hall to start his day as an instructor in the basic communications officers course (BCOT) well before 6 a.m.

Besides being an instructor, he's the flight's computer network guru and resident electrical engineering expert. He's in early to help write a new log-on script program to automate computer resource tracking in the communication and information schoolhouse.

Watching him work can be intimidating as he peruses lines of executable program files searching for a key line in his new program. Janoso is well equipped to handle whatever may happen. In addition to his experience in other assignments and contingencies as an electrical engineer, he's also a graduate of the Air Force Institute of Technology Advanced Academic Degree program. He completed a rigorous master's degree in electrical engineering with an emphasis on digital analysis and simulation.

The AAD program provided him with an extensive background in telecommunication network design and performance modeling, including analysis of new low-earth-orbit satellite networks. He takes that knowledge and incorporates it into the classroom.

"Being able to bring along some of the latest cutting edge technologies I learned while at AFIT has enabled me to really challenge the communications and information officers attending electrical engineering training at BCOT," said Janoso. "We've been able to add a great deal of realism to the training that the Air Force's newest electrical engineering officers receive. This type of training helps ensure our graduates achieve a much higher level of comprehension of how the communications equipment they will use in the field works and what the future may hold for them."

As quickly as he has spoken, he excuses himself to



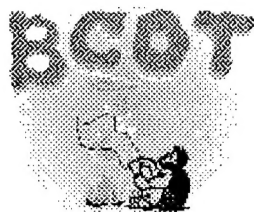
From left: Capts. Robert Weber, Andrew Feltman and Rich Janoso discuss potential locations of radio sites for a BCOT exercise.

check the LAN server monitoring his new program.

Since Janoso's arrival at BCOT, several other AAD graduates have joined him. They have all brought an acquired expertise and helped implement major changes in the lesson plans of not only BCOT, but also the advanced communications officers training course.

The combined ACOT/BCOT staff now boasts resident experts in electrical engineering, information resource management, and computer science. Their assignment to the communications and information schoolhouse after completing their AAD programs is not a fluke. Rather, it has been a well-orchestrated move to bring these highly qualified individuals to help teach tomorrow's communications and information leaders.

"In the past when one of our students asked a really tough technical question, we didn't *always* have a "go-to" person on the staff. Now we can simply turn to one of these experts and our students can get a quick, highly technical answer to their question," said Maj. David DeLoach, flight commander. "They also help keep us up to date with the latest developments in this incredibly diverse career field."

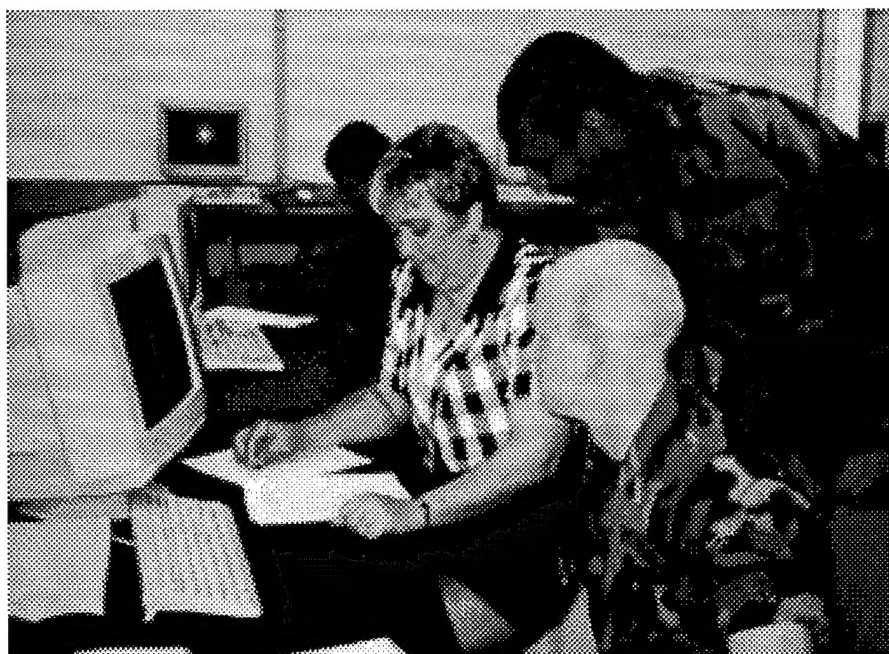


First phase of career field merger incorporates technology into coursework

Although the merger of the Communications/Computers Systems Operations and Communications/Computers Systems Controller career fields has been delayed until October 2000, the first phase begins this fall with the incorporation of updated technology in the current courses for each AFSC.

Additionally, this first phase includes a substantial increase in numbers of students for each course to prepare the Air Force to better meet the needs of operationalizing and professionalizing the networks (OPTN) of the warfighter.

The projected number of 3C0X1 graduates will increase from 1,069 per year to 1,483. At the same time, the number of 3C2X1 graduates will almost triple from 275 to 685 students. These dramatic increases are needed to offset losses due to decreased retention rates of current expertise as well as the tremendous growth in the number of the persons required to support increased Net-



Tech. Sgt. Anthony Percy teaches Shirley Moody and Senior Airman Brian Hinkle to administer the Defense Message System.

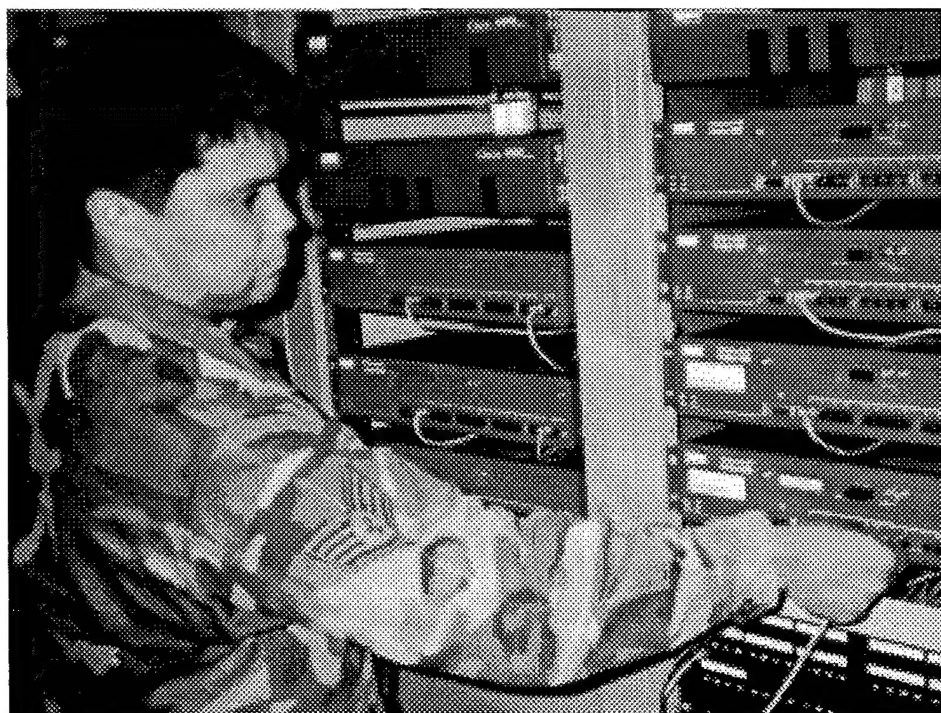
work Control Center workloads throughout the Air Force.

The 333rd Training Squadron's training devel-

opers and instructors are anxious to keep moving toward the vision of a single career field called network operations. Both courses are implementing new changes to smooth the transition into the merger of the 3C0X1/3C2X1 AFSCs. October will find changes in both courses representing each AFSC.

The 63-day 3C031 course will incorporate current technology items from the merger mandates. The course will include Windows NT, NCC enhancement concepts, increased Electronic Principles, and will also align with the forthcoming merger course. The 3C231 course has replaced older legacy equipment, and will incorporate many of the merger plans into their 80-day course.

The 333rd TRS continues to provide Air Force personnel the skill sets necessary to excel at information superiority and today's challenging operations climate.



Staff Sgt. Martin Sterling plugs a cable into an access router in order to perform an operational test on a network switch.

Instructor Duty:

The challenge and the adventure

By Staff Sgt. Leonard Finnie
333rd Training Squadron, Keesler AFB, Miss.

Instructors live a high-speed life that is both challenging and rewarding. They are the dedicated professionals who shape the military force serving our country through the essential training they provide. They live our motto of "building the world's most respected Air Force one person at a time." Six instructors from the 333rd Training Squadron spoke candidly about their experiences.

Tech. Sgt. Will Higdon, a 3C0X1 Computer Operator, enjoys his job as an instructor. The technology in this career field changes weekly. "I feared instructing would severely cripple my hands-on ability and set me back years in technological knowledge, but I was wrong," said Higdon. He reads, studies and stays abreast of today's technology. As an instructor, he finds the answer to the previous day's question.

"I have to stay abreast. What I don't learn from reading, the students are sure to tell me," Higdon explained. "Most of all though, the true thrill of being an instructor is like spending all day flying through tough weather and complicated situations just to find food. Finally you get just the nutrients you need and approach the nest with a mouth full. The chicks are all looking up wide-eyed with necks stretched just to get a tiny bit of what you worked so hard to find. Some don't care to eat, but the ones that do beg for all they can get. Now, they're satisfied and growing. Tomorrow is another hard

day, but the look on their faces has made it worth the effort."

Ray King has more than 15 years of experience as an instructor. He started teaching as a staff sergeant and left the military in 1984. In all that time he only spent two weeks away from Keesler AFB before being hired as a civilian instructor.

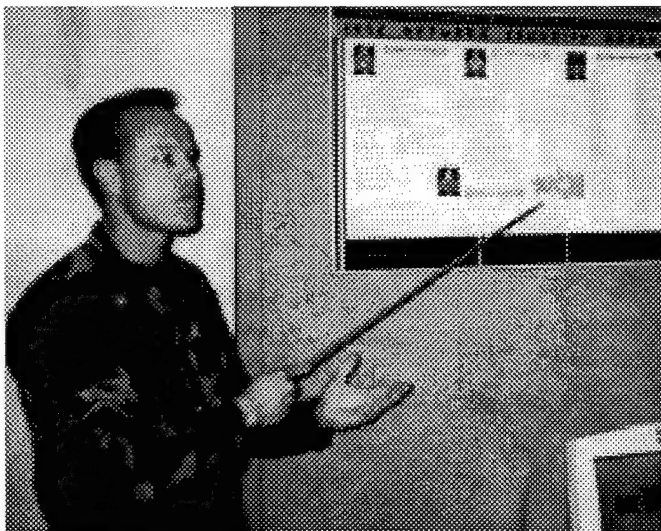
"I first became an instructor in 1984," said King. Since then, I've taught mid-career NCOs, pipeline students, joint service students, mid-career officers, lieutenants and civilians. There have been pleasant and unpleasant times, but it has all been worth it. What makes it worth it? The knowledge that somewhere students of mine are better off because they learned something during my time with them, and the military is better off, and the nation, and the world, because of what happened in my classroom," he said.

King has many instructor "war stories" but one sticks out in his memory. "For years I taught the Advanced Comm-Computer Officer Training, ACOT. During one graduation ceremony, after all the awards listed in the program had been given, the class leader announced that there was one more award to be given: the Outstanding Instructor award," said King. "I was honestly shocked to find they had given it to me. I am proud of this award above others I've gotten because I hadn't been working towards it. No one had any idea the students were going to do this. And I especially didn't think they'd ever choose me. Looking back, I think ...they just liked the learning environment I created."

Before moving to the Qualification Training Flight as a Training Specialist, King taught the following courses: Phase IV Computer Operations, Computer Security Officer, Enlisted Computer Operator, Joint Operations Planning System, Joint Planning and Execution Course, World Wide Military Command and Control System Intercomputer Network (WIN), Advanced Comm-Computer Officer Training (ACOT), and Basic



Ray King holds one of the tools he uses to illustrate the world's first computer.



Tech. Sgt. William Higdon reviews a Network Security Principles chart with a new 3-level class.

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INSTRUCTOR

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Comm-Computer Officer Training (BCOT).

Capt. Joel Rudy shares a few advantages and disadvantages about his teaching experiences:

The Advantages

"It's a good family tour. With the exception of certain surge times, I've been able to spend a lot of time with my family. I don't have to worry about deploying, or working excessively long duty days on a consistent basis," said Rudy. Teaching advanced communications and information officer training (ACOT) exposes Rudy to more than 400 functional experts from the field every year.

The students average more than eight years of active duty time, and they bring in what is happening in the field. He is exposed to the views of every MAJCOM, every NAF, and every echelon of command in the Air Force.

"What other assignment can you say that? My students will impact the operational forces. My graduates are out on the front line maintaining the systems at Aviano, in the Desert, and in Turkey," said Rudy. His students take knowledge they learned at ACOT and directly apply it to today's Air Force contingency operations.

"Additionally, I have a chance to network with my peers," said Rudy. "I see captains and majors and mid-level civilians in my career field. With more than 400 students coming through every year, I am guaranteed to run into these people again, probably with one of them being my next boss."

The

Disadvantages

Rudy explained that being out of the career field for two to three years is one disadvantage to instructor duty.

"Without the expertise of the students, I lose the exposure to how the Air Force is changing and to the current tactics, techniques, and procedures of the comm & info career field," Rudy said. "I originally turned my nose up at this assignment; my initial thought was, 'My career is over, only people about to retire teach in the schoolhouse.' AFPC and the 333rd TRS have worked hard to bring in the best and the brightest instructors to teach



Maj. David Deloach (left) and Capt. Joel Rudy clarify some course materials before the next hour of instruction.

tomorrow's comm & info leaders. It's exciting to be working around such enthusiastic and motivated officers."

Overall

"This is one assignment that I would repeat in a heartbeat. The exposure to the entire career field, and a large number of my peers have made this an invaluable experience -- one that I wouldn't trade for anything!"

Maj. David Deloach, Air Force communications officer training flight commander, had a few words about duty as an instructor:

"I get to talk to students about things that can help them do their jobs more effectively. I enjoy talking to them about the experiences they've had that help illustrate the points I'm trying to make in the class," said Deloach. "I take pride in knowing that I've made a difference in the most respected Air Force in the world. There are probably a bunch of other instructors who feel pretty much the same way."



Master Sgt. Dale Fogle sits in a Client-Server NT administration class.

Master Sgt. Dale Fogle liked being an instructor so much, he decided to come back for a second tour.

"I was an instructor early in my career and it was one of the best jobs I ever had. Not only did I feel a great deal of personal satisfaction from knowing I had a direct impact on Air Force personnel early in their

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Tech. Sgt. Chris Gooding shows Airman Bryant Lewis and Airman 1st Class Jennifer Alfaro the inner workings of a computer.

INSTRUCTOR

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career, the camaraderie among the instructor corps could not be surpassed anywhere. All of the instructors had one clear, focused goal and that was to ensure the Air Force got optimal benefits from the best communications-computer operators cultivated by our course.

"It's also important to remember that instructors may have an influence on whether that young airman decides to make the Air Force a career. The image an instructor presents draws a big picture for the students on what the career force is about. It's important to always have a positive attitude and a polished Air Force image because once an unfavorable image has been cast, it is hard to correct."

After he left instructor duty, he returned to the field where he had a myriad of assignments, both state-side and overseas. Each assignment was unique and each had its own share of ups and downs.

"However, outside of being an MTI, instructor duty is the one where you can have the most influence on someone in the shortest amount of time," said Fogle.

Tech. Sgt. Chris Gooding is very happy with the time he spends as an instructor.

"It's THE best job in the Air Force," Gooding said.

"As a supervisor in the field, you're a positive force for the 10-15 people who work with you. As an instructor you're a role model for hundreds of students a year. You can't provide a better service to the Air Force than shaping the minds of our future leaders.

This is my second tour as an instructor and I wouldn't change a day of it. There's no greater feeling in the world than when a student tells me, 'Thanks, I learned a lot in your class!'"

Working as an instructor is a challenging but rewarding and crucial job. The Air Force needs qualified volunteers to step up to the challenge; so if you are the best of the best in your career field ... continue sharing your skills and knowledge with the next generation entering the Air Force.

If you have what it takes to be an Air Force instructor and are up to the challenge, check out your Equal Plus listing and see if there is a slot available for you.

Computer programming course to see major changes

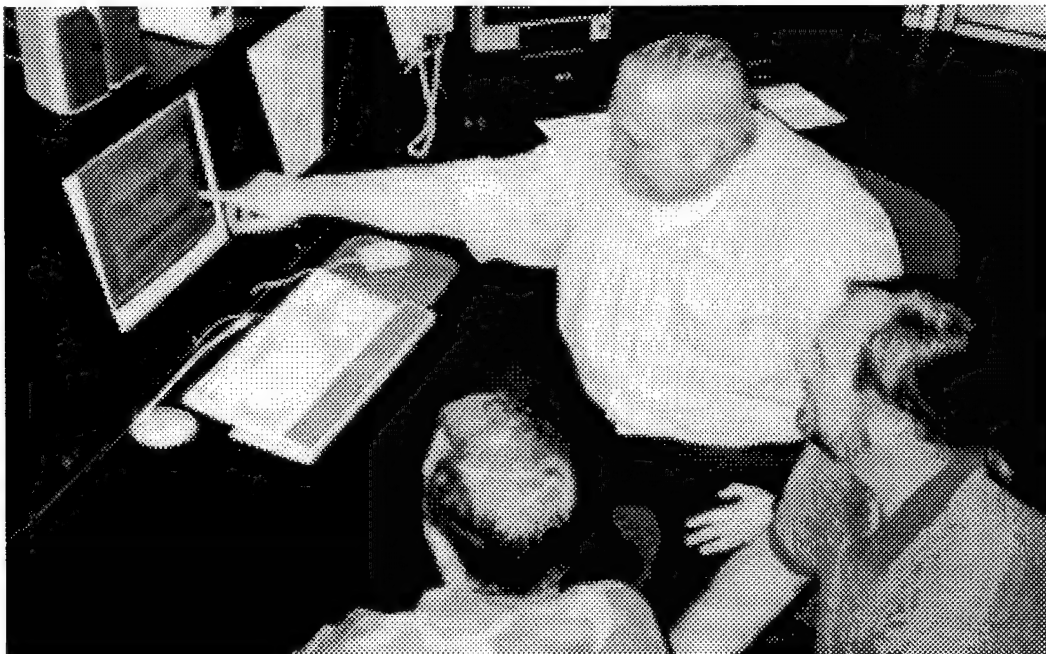
The Communications Computer Systems Programmer (3COX2) resident courses and career development courses will soon undergo major revisions as a result of a utilization and training workshop held at Keesler March 29 to April 1.

Despite rumors that the 3COX2 communications/computer systems programmer courses are counting down their final days, the Air Force still needs the 333rd Training Squadron to stay in the programmer training business.

These revisions will not only refresh the content of each course but also the associated hardware and software. Some of the changes to the 3-level course include the addition of C++ programming language, the deletion of ADA, Assembly, and COBOL programming languages, greater emphasis on database management, and a reimplementation of top-down structured design with less emphasis on object-oriented design.

The 7-level course will take on a more application-oriented or hands-on approach while the 5- and 7-level CDCs will be revised to reduce repetitive material between the two levels and increase the proficiency codes in many tasks.

The instructors and training development staff eagerly look forward to enhancing the 3COX2 courses as well as the knowledge and programming skills needed to support the warfighter.



Terry Bartusiak, Jerry Gardner and Tech. Sgt. Jeff Westgate review the new template they are producing for the Q Flight.

Bridging the gap between theory and application

By Staff Sgt. Leonard Finnie
333rd Training Squadron, Keesler AFB, Miss.

The qualification training flight, Q Flight, is the only organization of its kind producing exportable training products used to guide qualification and on-the-job training for communications and information professionals throughout the Air Force.

Q Flight products focus primarily on actual "hands-on" task-based performance training designed to qualify an airman in a specific duty position. Put another way, they bridge the gap between the theory and application of qualification training.

This highly motivated flight consists entirely of enlisted personnel who are specialists in their respective career fields. They develop written training packages and interactive courseware as tasked by the comm and infor career field managers on Air Staff.

These products are then made available to customers through quarterly CD-ROM distribution as well as through the internet (<http://www.keesler.af.mil/333trs/qflight/welcome.html>). The quarterly CD-ROM, known as Q-MAIL, and larger, more graphic intensive interactive courseware CD-ROMs can be ordered through our Web site as well.

Q flight's training materials are provided in digital format to more than 50,000 active duty, Guard, Reserve, and Department of Defense trainees. Although the flight's students aren't in a classroom, the packages and

handbooks have a broad reach when considering the number of fixed and deployable communications trainees impacted by its products.

The flight concentrates their efforts on the field technician after they've completed their formal 3-level tech schools. Our detailed training packages allow the trainee to review a task before the hands-on training occurs. The packages also give the trainer a standardized means to ensure the trainee has completed all of the steps required for certification on a task. The benefit to the comm & info community is a standardized approach to task certification throughout the Air Force. As comm & info personnel deploy to support contingency tasks, they will work side by side with others who trained on the same task in the same way.

To meet future demands for operations and maintenance training on systems not available at the training sites, Q Flight is developing a simplified, programmer-free computer-based training template. This template will allow CBT development by any curriculum developer without the intensive courseware training now required by our ICW developers.

CBT courseware using this template can include still pictures, audio and video clips. Each training package will use multimedia that best fits the training needs of personnel in the field.

Q flight is proud of its mission success, "bridging the gap between theory and application" for the communications and information warriors.

335th Training Squadron: Training today for tomorrow

By Capt. Marsha E. Lafayette
335th TRS, Keesler AFB, Miss.

While the 333rd Training Squadron is the heart of communications and information training at Keesler Air Force Base, you could say the 335th Training Squadron acts as one of its arteries, being the lifeline for all information managers, radio communications systems communicators, and spectrum managers in the Air Force.

The 335th TRS is perhaps one of the largest and most diverse training squadrons in the Air Education and Training Command, managing training for more than 90 courses in 26 Air Force specialty codes. Approximately 200 personnel develop and conduct initial and follow-on training annually for more than 15,000 Department of Defense, international, contractor, and other government agency students.

The squadron is comprised of five flights and two geographically separated detachments responsible for conducting training in information management, radio communications systems, spectrum management, manpower, personnel, command and control, aerospace control and warning, public affairs, law, and postal and visual information.

Lt. Col. Kevin G. Boggs, 335th TRS commander, recognizes the importance of communications and information courses. "Our communications and information courses provide the foundation skills necessary for today's airman to be proficient at Information Superiority," Boggs said.

The 335th TRS's communication and information management flight is directly responsible for providing the Air Force with information managers, radio communications systems communicators, and spectrum managers ready to meet the challenges of tomorrow's Expeditionary Aerospace Force.

The flight is comprised of six resident courses and eight career development courses in information management, radio communications systems, and spectrum management. Their mission is to provide quality training through a professional staff while using the latest computer technology and diverse teaching techniques.

The highly skilled staff of 47 military and civilian experts excel at training more than 3,000 graduates annually and they couldn't perform their mission without the strong rapport with the functional community at Headquarters Air Force and major command career field functional managers who enable them to outfit the

schoolhouse with quality staff and the latest technology.

The information management apprentice course is a 37-day course comprised of five blocks of instruction. Approximately 1,500 non-prior service, active duty cross-trainees, Guard, Reserve and international students, graduate each year. They learn everything from basic information management functions to work group administration duties.

By the time these students graduate, they are able to conduct initial troubleshooting during computer failures, allowing prompt solutions to meet workplace needs, as well as be familiar with proper documentation procedures throughout the life cycle of information.

The information management craftsman course is a 10-day course with two blocks of instruction. Students refine their skills in a variety of topics such as functional management responsibilities and web page development. Both the apprentice and craftsman courses include plenty of hands-on training.

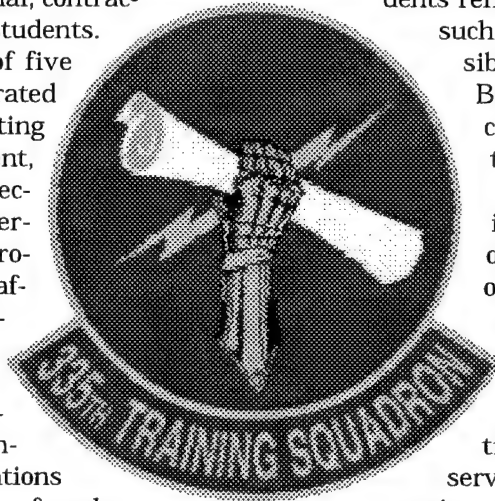
These courses are presently being revised to add even more hands-on training with an additional focus on Microsoft NT skills. The revised courses go on-line in October.

The radio communications systems course is a 31-day course comprised of four blocks of instruction. Approximately 400 non-prior service students and active duty cross-trainees graduate each year. Students learn

computer operations, radio principles, ground radio equipment, communications systems and missions, and global operations.

Upon graduating, these students are able to provide radio communications and data support to aircraft, ships, ground stations, and satellite users across the world. The radio systems craftsman course is a 10-day course with two blocks of instruction. Students learn everything from radio systems capabilities to mission planning. All MAJCOM radio communications systems functional managers met at Keesler AFB in June to review and make changes to the curriculum to ensure the currency of the courses.

The inter-service radio frequency management course is a 70-day course comprised of 10 blocks of instruction with approximately 85 students in attendance each year. The student body includes officer and enlisted personnel, DOD civilians from all U.S. services



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Tech. Sgt. Paul Godfrey teaches air to ground voice communications in the global communications library.

A learning experience

By Tech. Sgt. Paul Godfrey
335th Training Squadron
Keesler AFB, Miss.

The other day somebody said to me "Why are you still in the Air Force? It's not worth it these days." I guess you could say I took great offense to these comments. For those who ask why, it's simple. I didn't join the Air Force for its benefits. As a matter of fact, I didn't know what my benefits were until I had been in for a few months. I joined because I believed it was the right thing to do.

My father served in the Army and although he influenced my decision to join the military, he let me choose the branch of service I was interested in. He told me to make the Air Force what I wanted it to be. So, it wasn't the benefits that made me stay in the Air Force. I stayed in because I knew I was maintaining our way of life.

Many people don't understand how important their jobs are in the Air Force, or the significance of doing their jobs to the best of their abilities. I've been assigned to tactical units 11 of my 16 years in the Air Force, and I saw many significant accomplishments throughout those tours.

I'm presently assigned as a radio apprentice course (3C1X1) instructor at Keesler AFB. Although no longer in a tactical unit, my mission is just as important, if not more so.

I have the opportunity to touch the lives of every radio operator entering the Air Force. I spend close to 300 hours a month with each student, ensuring they

are trained to the degree they need to be, prior to arriving at their first assignment. This gives them the edge they need to succeed and the foundation to excel in the Air Force.

Upon completion of the radio apprentice course technical school, these new radio operators get their first real taste for the Air Force when they report to duty at their first assignment. Assignments can be anywhere in the world, from Korea to Hawaii, Turkey to the Azores, and all throughout the United States, performing duties in Special Operations units, global high frequency radio stations, and in mobile units.

Instructor duty has been one of my most satisfying jobs in the Air Force. You're the first person the students interact with in their career field, and you have the opportunity to make a lasting impression on them. Helping to shape a person's future is an experience I treasure.

With personnel being our most important resource, it's up to us, as instructors, to help each student develop the attitude to want to learn and become an asset in the service of their country.

You could say my fellow instructors and I are public servants. We don't seek wealth or riches. As most of you know, you can't get rich in the military, but you can become rich in knowing that what you're doing helps ensure our way of life as our forefathers intended. We focus on the fact that these students are our future leaders and it's up to us to get them off to a great start.

If you've ever thought about being a Radio Apprentice instructor, or even considered teaching our future leaders, now's the time!

335th

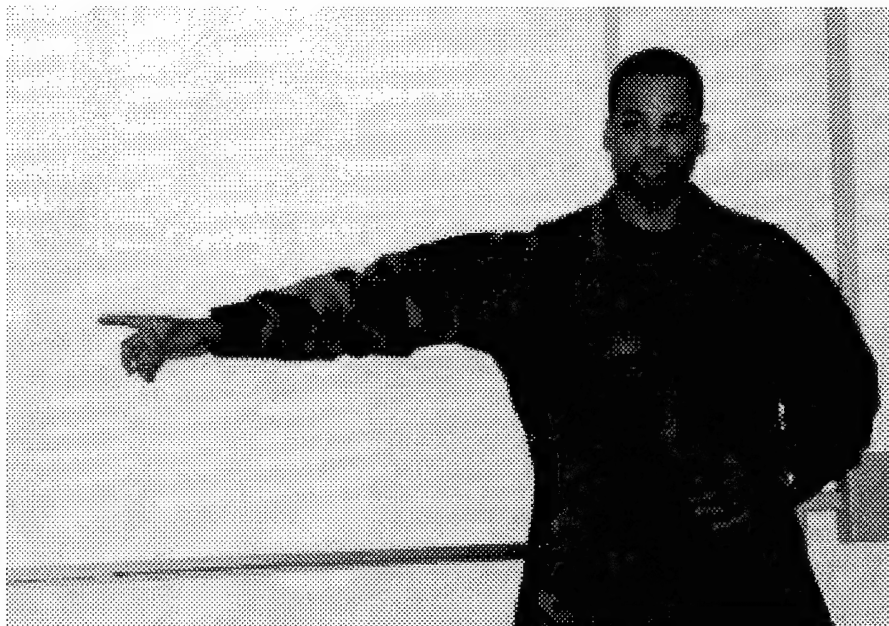
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as well as DOD components and private contractors. NATO and international students from various countries including Australia, Egypt, Germany, Greece, Israel, Jordan, India, Italy, New Zealand, Philippines, Saudi Arabia, Slovenia, South Korea, Spain, the United Kingdom, and the Netherlands also attend. Upon graduating, these new spectrum managers are able to provide spectrum management support to the warfighter at various levels to include contingency operations.

Instructors in the communications and information management flight face a myriad of challenges daily. In addition to meeting the demands of the ever-changing technological world, they must also keep their finger on the pulse of career field progression. These challenges, however, don't amount to much when it comes to teaching and making a difference in the lives of thousands of students annually.

The instructors take pride in what they do. As their flight commander, I can honestly say that they are the best of the best at what they do. In fact, the Communications and Information Flight was the only academic flight out of 18 within the 81st Training Group to receive an "Outstanding" rating during Air Education and Training Command's Operational Readiness Inspection of the 81st Training Wing in March.

Additionally, one of our instructors earned accolades as one of Keesler's Communications and Information Professionalism Award winners in 1998. We in the 335th are proud to say we have the Air Force's finest training today's communication and information warfighters for tomorrow's Expeditionary Aerospace Force.



Staff Sgt. Dougless Morsette teaches network topology in the Information Management Apprentice Course.

Instructor duty: The foundation for my success

By Staff Sgt. Dougless Morsette
335th Training Squadron
Keesler AFB, Miss.

Instructor duty is both rewarding and challenging in more ways than I had imagined. I often wondered if I had what it took to be an effective and efficient instructor.

There was a time in my life when talking in front of people was out of the question. I was afraid of standing in front of a group for any reason.

Now that I'm an instructor, I've gained the confidence to speak in front of audiences both large and small. I knew it would take a lot of hard work, but challenges are simply obstacles I've learned to overcome.

I couldn't have gained this skill had I not been an instructor. In a technical school environment you must aim high ... a routine day at work is not an option!

As an information management instructor, I'm proud to be a member of a staff who teaches more than 2,400 students each year who go on to become the Air Force's front line communicators. I especially enjoy the benefits I've received as an instructor.

I've been able to obtain my occupational instructor certificate, an associates degree in information management, as well as an associates degree in occupational instructor of technology.

The sky is the limit as an instructor in the information management career field.

Just as anything you do ... it is based on how much you are willing to go the extra mile. Instructor duty in the information management career field has not only prepared me for continued success in the military, it has prepared me for what lies ahead in the future.

Career Development Courses and you

By Master Sgt. Phil McMorris
Keesler AFB, Miss.

"You have 30 days to complete this volume." Why only 30 days to complete this volume of your Career Development Course when there are only three volumes and you have a year to complete the course. The volumes are boring ... where do they get this information? Why do I have to learn about other functions of information management when I do not work with them?

"Have you or your troops ever asked these questions? I can shed some light on common questions I've been asked as a CDC manager.

Let's start from the beginning. About every two years the IM career field has a utilization and training workshop. The Air Force and major command IM career field managers attend and decide the future of the career field basically what people in the career field need to know to perform their jobs.

Once they've determined career field needs, they decide where training should take place (in-residence school, CDCs, or OJT). This is how the career field education and training plan is developed.

By using the proficiency code key table in part 2 of the CFETP, the CFMs determine what the task performance or knowledge levels need to be in the specialty training standard. Each STS item is then marked appropriately (either a number and lower case letter, a lower case letter, an upper case letter, or a dash) to determine where training will occur. For example, if it's marked for a performance level (number and lower case letter), then it will be taught by a resident course. If marked for a knowledge level (lower case letter or upper case letter) it will either be taught in the residence courses or through CDCs.

When the CFM determines that an STS item is taught by a professional military education course or is better taught by OJT (job specific/MAJCOM specific) the item is marked with a dash.

Let's talk about how CDCs fit into the big picture. The IM career field is diverse with people serving in various positions accomplishing different missions.

When the CFMs attend the U&TW, they decide collectively on STS items to apply for all information managers Air Force wide.

They determine governing directives for each STS item and list them in the STS under the header, training reference. Since STS items apply to all information managers Air Force wide, TRs must be Air Force or DOD publications.

Once STS items are completed, the CDC manager begins writing (often referred to as being in production). Their first step is to examine each STS item and their proficiency code. The CDC manager tries to place like

items into volumes, then units, and finally lessons. Keep in mind that CDCs are written only for knowledge items; performance items aren't covered.

The most common proficiency codes used in CDCs are: "A", which identifies basic facts and terms; "B", which identifies the relationship of basic facts and state general principles; "a", which names parts, tools, and simple facts; "b", which determines step by step procedures; and finally "c",

which identifies why and when the task must be done and why each step is needed.

They next review each TR for the STS items. Information is gleaned from the TR to support the proficiency level for the STS item. After this information is gathered, it is compared with the residence courses. Information taught in residence courses is not repeated in the CDCs. The CDCs build upon the information learned in 3-level residence course and prepare the basic knowledge level for the 7-level residence course.

Each STS item must be covered to the correct proficiency code listed in the STS. In other words, if the proficiency code is an "A", you will have a list of items with basic facts and terms about each. Each lesson is then written. When writing about a subject, the CDC manager tries to keep the information alive, but it's often difficult to make an area exciting. What some might find boring, others may find interesting.

Once all the lessons are written and compiled into their respective volumes, a subject matter expert re



See CDC next page

CDC

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views the CDCs to ensure the information presented is current and accurate with the TRs. The SME is someone who has extensive experience in the career field and is not the CDC manager.

We now have a completed CDC volume. It is current as of the date it is sent to ECI for publication. The process doesn't stop when it is published by ECI. The CDC manager reviews the TRs constantly, compiling any new information for supplements to keep the CDC current.

CDC managers also consider feedback they receive from the field through the ECI Form 17, telephone calls, and e-mails from trainees, supervisors, training managers, and CFMs.

Now to answer the 30 days per volume question. Have you ever read the first page of your CDC volume? If you have, you noticed that at the bottom of the page there is a statement of how many hours the volume is rated. For example, the 3A051A, Volume 1 CDC is rated at nine hours. It means that the average person should be able to complete that volume in nine hours of study. Most supervisors give the volume to the individual and have them complete it on their off-duty time. Once they

complete the volume and the review exercises, the supervisor or trainer will review it with the trainee. They will concentrate on the areas that the trainee has the most problems. The CDCs are written to be a stand-alone document so the trainee doesn't have to look up the TRs to learn.

The supervisor can use the TRs to supplement the training, especially when the trainee is having problems in a specific area. Unlike other career fields, information managers don't usually work for others in their career field. This is where the supervisor also has the valuable tool of using the base IM functional manager.

The base IM functional manager is responsible for training information managers on their base. To coordinate all these efforts, 30 days is a good time frame to complete each volume, but as every supervisor knows, everyone does not learn at the same rate, or something unforeseen can come up and interrupt training. ECI gives a year to complete a CDC

course, but you don't want to wait until the time's up.

That year time frame is to complete your end-of-course test. You only get two tries at passing the EOC test. If you wait until you have one month left to take your EOC, you might not get a chance to study and retest if you fail it.

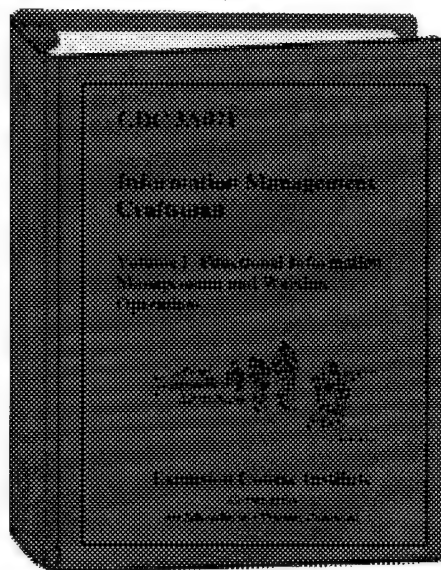
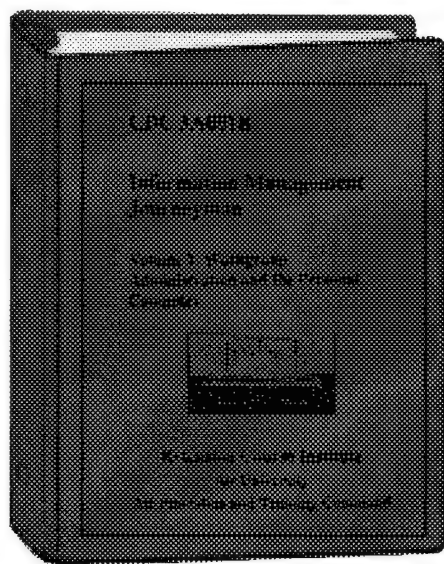
Let me pass on two more items that have become the focus of inquiries: The first deals with CDCs and the weighted airman promotion system. Every year, just prior to testing, I receive numerous phone calls and e-mails asking me to send people who are studying for promotion a copy of the unit review exercise answer key.

The URE answer key is not part of WAPS; it is part of upgrade training. It is a device for the supervisor or trainer to use to evaluate their trainee's accomplishment. The trainee is not allowed access to the answer key until the URE is completed. Then they are corrected to 100 percent and the answer key is destroyed by the supervisor or trainer.

Lastly let's talk about the role of the supervisor, trainer, and base IM functional manager. I've been receiving inquiries directly from the trainee without first discussing their problems with their supervisors or trainers.

I have received questions ranging from a request to explain an entire lesson to answers on the URE. These questions need to be addressed to the supervisor or trainer. If you are a supervisor and don't know the answer, contact your base IM functional manager. If there is a technical error (i.e. the publication changed or wrong answer marked in the URE answer key), that's the time to make an inquiry. It could take weeks to get a reply using the ECI Form 17 because of the routing. E-mail and phone calls will usually get a response within a week.

As you can see, a lot of hard work goes into developing a CDC and ensuring it remains current. Remember, CDCs are written for all members of the AFSC, so Air Force directives are used. MAJCOM specifics and local requirements have to be trained by individual supervisors. If the supervisor or trainer uses the CFETP in conjunction with the CDCs, they will have a better trained, more knowledgeable troop.



Information management transformation triggers massive changes in daily tasks

By Master Sgt. Glenn Lowery
335th Training Squadron
Keesler AFB, Miss.

Most information management personnel entered and retired from the service during a time one could refer to as the paper management era ... a time complete with typewriters, carbon paper, and filing cabinets that lined the walls of administrative offices.

Over the past few years, the Air Force has witnessed an unprecedented technological growth within the IM arena as we entered the information age. Management of information is undergoing a huge transformation and is triggering massive changes in the way we accomplish our daily tasks.

This transformation is due to the integration of automated systems within the life cycle of information. Computer systems are now involved in every step of the life cycle: creation, collection, access, storage, retrieval, and disposal. During creation, different software application programs are used: MS Word, MS PowerPoint, MS Excel, MS Access, MS Mail, Form Flow, and the Air Force Records Information Management System. These programs are just some of the everyday tools used by information managers to create information.



Staff Sgt. John Petty watches as students disassemble computers in the configurations portion of the course.

During collection, databases and forms are used to gather information in its most efficient media. Once the data is collected and organized, it aids in the decision-making process. Access, storage, and retrieval are the steps used to control and manage the information. Types of controls and management include MS Windows 95, MS Windows NT, file management procedures, sharing permissions on electronic folders, Freedom of Information Act, records management, Privacy Act, network access control, resource access control and security access control. Disposal is the final step and is based on the Air Force Records Management Program... the guidance that dictates when and how to destroy the information regardless of its format (paper, electronic, etc.)

A very large part of the information we manage today is stored on computer systems. The most efficient way of sharing information between computer systems is through a network. Nodes, workstations, protocols, Ethernet, bridges, routers, servers, repeaters, transmission control protocol/internet protocol, topologies, unshielded twisted



Information Management Apprentice Course students review publications and forms management.

pair, 10BaseT, and 10Base2... this is the new terminology information managers must know to effectively operate within a networked environment.

If computer systems break down, information managers are the first line of defense to configure, troubleshoot, and restore them. This is another new concept within the IM career field—workgroup administration tasks such as personal computer configuration, troubleshooting, and restoration. These added skills allow minimum downtime of mission essential PCs. Networking, along with PC basics, provides a fundamental knowledge of how information is being managed by the computer systems.

Because of the increase of lower-level unit server-client networks in the Air Force, the IM field is going to increase its emphasis on workgroup management. Information managers perform workgroup management to ensure users have access to their information through a networked environment, some might say very similar to a systems administrator. This process requires skill and knowledge in the networking area. Information managers must be equipped to assist in developing and troubleshooting a networked environment and assisting end-users with day-to-day computer problems.

Excited about the future of IM'ers? Sure...but what about the necessary training? Ever been to Keesler Air Force Base on the ever-growing Mississippi Gulf Coast? That's where you'll find the 335th Training Squadron and both the apprentice (3-level) and craftsman (7-level) training courses. A group of 27 energetic and enthusiastic military and civilian instructors at Keesler take on the mammoth task of providing initial and advanced



Larry Yarbrough teaches a software application course.

skills training to the Air Force's information managers.

The current 37-day apprentice training course is being modified, and effective September, will be comprised of five "blocks" of intense instruction using Windows NT client workstation software. The first objective will be to cover the overall structure of information manager career progression and the specific duties and responsibilities of the various jobs within the career field. In today's Air Force, the information manager is mobile, and we discuss the role and skills used and needed in wartime along with the Air Force core competencies. After a brief introduction to the airmen's new job we focus on the main processing tool of the information manager—the computer. Students learn the importance of software and hardware control

and accountability and will be introduced to some initial computer system diagnostics to help them prepare for the operational Air Force.

Next will come the installation and configuration of different peripherals, network interface cards, hard drives, printers, and other devices students might encounter at their first duty assignment. Once the students have an understanding of how a computer functions, we'll cover the information super highway.

Then we'll present the network architecture and basic concepts associated with a network and teach them how to operate by using the graphical user interface. File management and file transfer protocol will be stressed



Staff Sgt. Ronshella White reviews business process course material with IM apprentice course students prior to testing them.

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TRANSFORMATION

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due to its link to life cycle management. Addressing both e-mail and networking will then be covered to give the students a better understanding of how information gets from one point to another.

The next part of the course will expand on what the students have already learned. They will install software and learn basic function with the Microsoft Office 97 software package. These include Outlook, Word 97, PowerPoint, Access, Excel, and Front Page Express. We will demonstrate web browsing and visit several Air Force sites. This will give the students a first-hand look at what information is contained on an Air Force web page. The students are then tasked to build a web page with graphics and links to other sites. Included in this section are other basic software packages that students may be required to operate to include Records Information Management System, JetForm, file compression, Anti-Virus software, and the new Defense Message System.

Of course we'll also cover some of the core basic information management duties, which include keyboarding, document security, records management, forms and publications management, and publications and forms distribution... all of these will be taught to a basic knowledge level.

The last objectives will cover Security Awareness Training and Education along with managing user accounts on a network. This comprehensive training will be geared to produce airmen with a basic understanding of IM processes and the tools required to provide commanders access to the right information at the right time. All the while we're also building a strong foundation for supervisors and mentors to continue training to produce that mission-ready airman.

The craftsman training course is comprised of a 10-day course broken into two "blocks" of instruction. The first block covers functional management responsibilities, war and contingency operations, information warfare, emerging technologies, and electronic record-keeping. The second block covers areas such as internet use and web page development, network and risk analysis, initial system diagnostics, and finally local area network operations.

The job of an instructor is both challenging and rewarding. Assignments are controlled tours lasting four years. Approximately 1,500 students attend the apprentice course each year, while over 850 students come through the craftsman course. Duty hours for the apprentice course depend on which shift you're on ... one



Information Management students learn how to disassemble computers in the computer systems configurations portion of the course.

is from 6 a.m. until 4 p.m., and the other is from 2 p.m. until midnight. The duty hours for the craftsman course are from 7 a.m. to 5 p.m. All course material is researched, written, and developed by the instructors. This alone is a formidable task considering the fast pace with which the IM career field is changing. However, the rewards are many as well. Within any given four-year span, a group of instructors will have influenced more than 9,400 information managers. These instructors also gain skills in public speaking, research and development, individual counseling, supervision, and team-building. It's definitely a real tour of DUTY!

The Air Force's information management courses emerge from the need to provide highly trained and motivated personnel to sustain the mission of the Air Force. We believe the abilities, worth, self-respect, and dignity of each student must be fully recognized. Here we provide each student the opportunity to pursue and master an occupational specialty to the full extent of the individual's capabilities and aspirations for the immediate and continuing benefit of the Air Force.

For our instructors, our goal is to provide opportunities for individual development of advanced technical proficiencies, on-the-job training in a challenging job assignment, and continued growth as supervisors.

As you can see, today's information manager is getting the best training on the latest and greatest equipment and software to prepare them for the integration of automated systems within the life cycle of information. As we face the challenges of managing information in today's Information Age, our vibrant instructor staff at Keesler is building the skill sets for AF information managers to transform our processes to attain information superiority and remain the world's most highly trained and respected Air Force.

Spectrum managers in high demand

By Staff Sgt. Kelvin Johnson
335th Training Squadron
Keesler AFB, Miss.

A squadron commander has just purchased new land mobile radio systems for his unit to deploy to Turkey in support of a contingency operation. When they arrive in country they discover they can't use their systems because they haven't received spectrum certification.

How do you suppose they're to perform their mission? Who can they possibly seek to help resolve these issues? No more worries if your electromagnetic spectrum manager, most commonly called the frequency manager, was trained at Keesler AFB, you can rest assured they have the skills for a successful deployment.

Scenarios like this drove the Air Staff at Headquarters Air Force in 1969 to establish the requirement for specialized enlisted personnel training in managing the electromagnetic spectrum. They established the radio frequency management technician course and later that same year, then Headquarters Air Force Communications Service, now the Air Force Communications Agency, obtained authorization to establish and conduct a school to train Air Force personnel in this unique skill.

Because of the school's success,

both the Army and Navy/Marine Corps sent personnel on a space-available basis. As a result, July 1, 1974 the Army, Navy/Marine Corps and Air Force approved a joint agreement, which established the interservice radio frequency management school presently at Keesler AFB. In December, the school will celebrate its 25th year of training.

It's the only school in the world that trains a diverse group of individuals to manage the electromagnetic spectrum. Students who attend are Department of Defense enlisted, officer, and civilian personnel, federal government employees, foreign nationals, as well as private companies.

To date, the course has trained students from more than 20 different countries and is constantly receiving inquiries from others around the world to attend training. The school's reputation speaks for itself and has been used as the benchmark for several other courses in the spectrum management world.

The instructor staff is as diverse as its students. They include military members from all branches of service and one civilian instructor, all with backgrounds in the electronic and communications fields. Additionally, they're all Interservice Radio Frequency Management School graduates. The instructor staff plays a critical role in course

development. They attend workshops pertaining to operational issues, helping to keep the course updated and vision oriented.

Today's technological advances have created a great dependency on the use of the electromagnetic spectrum. As a result, spectrum managers are gaining more visibility and responsibility, especially during contingency operations. For this reason the instructors must constantly stay abreast of all technological advances and policy changes.

This is a challenge the instructors are proud and qualified to meet. For instance, when the need arose to have students trained on the latest spectrum management software, the instructor staff implemented additional hands-on training now provided on the most recent version of the software. The instructor staff is constantly working with the Joint Spectrum Management Center as well as the Air Force Frequency Management Agency in Washington, D.C., to enhance training.

Spectrum managers are in high demand, a true testimony to the training they receive. The instructor staff prides itself in being the world's premier school for spectrum managers. They take pride in knowing that in contingency operations, you can count on the spectrum manager to resolve the challenging issues faced by today's warfighter.

What being an instructor means to me

By Staff Sgt. Rebecca Charles
335th Training Squadron, Keesler AFB, Miss.

The job of an Information Management Craftsman Instructor is by far the most challenging and rewarding a person could volunteer for. I've been in the service for 10 years holding many positions, putting in the hours as many of you do, but the impact and responsibility I feel as an instructor is like no other.

If someone were to ask me what I like most about being an instructor, it would have to be the sense of satisfaction and accomplishment I get at the end of each duty day.

As an instructor you go home every night knowing you've influenced people all day long. You can't beat the feeling you get walking into a classroom knowing you have people eager to learn. It's a real motivator for me and it always drives me to want to learn more so I can share more.

As students come to earn their craftsman skill level, I strive to re-blue them into the career field. I urge them to strive for solutions, make a difference, and serve as an example for our younger airmen.

The job of an instructor is a very challenging one. I

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The near mission ready airman

By Staff Sgt. John D. Jenkins
335th Training Squadron
Keesler AFB, Miss.

The Air Force couldn't fulfill its national security mission without fast, accurate and reliable communications. It's well-known that information superiority will be the key to dominating future conflicts. The men and women trained in communications and information courses at Keesler will help create and maintain information superiority through their work as communicators well into the next millennium.

As instructors at Keesler, we recognize the need to provide highly trained and motivated personnel in order to accomplish the Air Force mission. We believe the abilities, worth, self-respect and dignity of each student must be fully recognized. We strive to support indi-



Manuel Moreno, Radio Communications Systems Apprentice instructor, spends special individual assistance time with a student in his Radio Principles course.

vidual development, facilitate maximum growth, and actively promote teamwork in order to produce the near mission ready airman.

To accomplish this critical mission, the hours tend to be long, the requirements tough, and expectations high. It's demanding, however, the rewards are immeasurable. The end product of our labor is supplying to the communications and information career fields a trained airman who is ready to perform his assigned role (and skill level) as a communicator.

Our success is not only measured by the new trainee's perfor-

mance within the career field, but by the support that's provided outside the career field to the warfighter who is in aircraft, on ships, or on the ground. No matter where you go, the jobs of communications and information professionals have far-reaching effects on the warfighter's ability to perform their mission.

So the next time you pick up the phone, send e-mail, or use the radio, remember all the communications and information professionals at Keesler who set the ball in motion in producing your near mission ready airman.

INSIGHT

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myself have been an instructor for two years and have rewritten our course twice. Sometimes people assume that instructors are only responsible for going in the classroom and lecturing but that's not even the tip of the iceberg. Instructors are responsible for other duties, which include writing course material, slides, any hands-on activities, and tests. They also have to prepare their own personal lesson plans. Sometimes, an in-depth lesson plan can take three hours to prepare

for just one hour of lecture.

Being an instructor is the key to unlocking many people's minds and motivating them to excel. There is no better feeling than on graduation day when a student shares with me that they are re-motivated to stay in the service or that they want to become a better supervisor.

My most memorable moment was when someone shared with me that I had changed his life. Being an instructor is an awesome responsibility and a **priceless** opportunity! It's a job with rewards I reflect on everyday.

333rd

From Page 6

clude still pictures, audio and video clips. Each training package will use multimedia that best fits the training needs of personnel in the field. Q Flight's workload is tasked by career field functional managers

who meet twice a year at training and advisory conferences. They inform the flight about field personnel's concerns and about training products that are required in the field.

The 333rd TRS at Keesler is continually growing to meet the ever-increasing need for network train-

ing, and communications and information technology skills.

As you can see, the 333rd TRS is made up of several dynamic flights of varied specialties whose professional staff continue to pump the life-blood into the communications and information career fields.

336th Training Squadron:

Leading the way in maintenance career field merger

By Master Sgt. Johnny Robinson

336th Training Squadron

Keesler AFB, Miss.

The 336th Training Squadron will be at the tip of the spear leading the charge for communications-electronics multi-role technicians at Keesler AFB. Like aircraft wings are to our Air Force, the 2E's sustainment of 21st century technology will be the lifeblood of the 333rd Training Squadron's 3C (computer operators and tech controllers) global communications mission.

Global communications provide vast capabilities which are vital to mission effectiveness; systems that must be ready when the time comes. And that time is now! The merger to combine the 2E2X1 electronic computer and switching systems and 2E3X1 secure communications systems maintenance is in full swing. The merged 2E2X1 career field will become computer, network, cryptographic and switching systems.

The computer, network, cryptographic and switching systems technicians will combine the skill sets of the computer maintenance tech and cryptographic tech with computer networking skills.

Computer maintenance training will include building a computer from basic components, formatting and partitioning drives, installation of operating systems and application programs, and hands-on troubleshooting.

Cryptographic training will entail limited maintenance training on the KY-57/58 (voice), KG-84 (data) and KG-194 (bulk) cryptographic equipment to National Security Agency certification standards. Networking skills will give students a working knowledge of all components of a network to include switching systems in a public branch exchange (PBX) environment.

Equipment will include redcom switches, asynchronous transfer mode (ATM), routers, hubs, bridges, integrated digital network exchange (IDNX), promina (IDNX) and practical transmission media skills (fiber, twisted pair, and coaxial). Students will be introduced to a variety of protocols and operating systems. The goal is to have a single technician who will deploy to a site, establish a secure communication system, and keep the system running. For more information about the course, visit the 2E web page at: <http://www.il.hq.af.mil/ilm/ilmm/cemaint/index.html>.

Major command leaders are making this change to

meet the rapid technology advancements in communications. Chief Master Sgt. Paul R. Karch, communications-electronics career field manager, wrote in the March 99 issue of *intercom* magazine:

"'Maintenance ain't what it used to be...' I hear this refrain often as I talk to communications-electronics maintenance technicians around today's Air Force. You know what? They're right on target! Technology has changed the scope and range of our maintenance activities.

"Our workload in the secure communication business dramatically changed from traditional maintenance to integration of communication signals, protocols, timing and end-to-end systems troubleshooting."

Advancements in technology will continue to drive constant change in our operations. The line between operations and maintenance blurs more each day with more efficient equipment and better training. This could soon eliminate the paradigm of having a separate operator and technician. Theater deployable communication is one example of how operators and technicians are working closer than ever. The AETC schoolhouse has operators and technicians working side by side developing a comprehensive course to train this future backbone communication system. Results: a TDC systems technician who is qualified for total system sustainment.

The current 2E2X1 and 2E3X1 training focuses on line replaceable unit (LRU) maintenance (i.e. displays, printers, processors, power supplies, and encryption component maintenance). That training focus has served us well in the past, however, with the advancements in technology these components developed into a complex network system.

We can no longer sustain only one part of the system; we must sustain the entire system. The focus is shifting to develop a technician with end-to-end sustainment capability. The first graduates of the new computer, network, cryptographic, and switching systems will appear at an Air Force base near you in April 2001.

It will take both operators and sustainment technicians working side by side to meet the dynamic mission requirements of the future. Communications-electronics (2Es) are working now on the answer: the computer, network, cryptographic and switching systems technician.



Teaching is more than a job, it's a passion!

By Tech. Sgt. Kevin M. Ott
336th Training Squadron, Keesler AFB, Miss.

Why would anyone want to be a technical training instructor? First, you no longer get your hands dirty working on the equipment in your chosen career field. Second, instead of training and supervising a shop or workcenter of 10-20 airmen, you now train and supervise 300-400 airmen a year. Finally, you're locked into a special duty assignment for four years spending most of it in a classroom far removed from the field.

Why would anyone want to do this? Because deep inside, every good instructor has a passion for teaching. You experience an overwhelming feeling of accomplishment and pride when your student, who one week ago didn't know how a power supply works, successfully troubleshoots and repairs the system. This gives you immediate personal satisfaction.

Our primary mission is to train future technicians on the technical aspects of their career field. First, we train the airmen on the inner workings of the complex computer and switching systems in the Air Force; explaining how the electrons, bits, bytes, data, and voice traffic travel from system to system.

Second, we show the airmen how the Air Force uses computers and switching systems to accomplish the mission. Whether it's command and control, combat communications, missile communications, intelligence systems, or office automation, the Air Force must accomplish its mission.

We also continue the military training the airman started back at Lackland Air Force Base. With the development and implementation of the Aerospace Expeditionary Forces, the days of being "in the rear with the gear" are a thing of the past. Now everyone in the Air Force will deploy to the field. It's no longer someone else's job to fight the war; it's everyone's job.

Our first task, technical training, challenges our students both academically, through written tests, and physically through extensive hands-on progress checks. Does each student understand the task at hand and can they perform the task? If the answers to these questions are yes, the student progresses to the next objective or block. Does everyone pass the course curriculum and qualify as a 2E231 electronic computer and switching systems apprentice? No, sometimes a student needs specialized individual assistance. This ad-

ditional time or training on an objective provides that student the help needed. Occasionally, a student doesn't have the skills or motivation to complete the course requirements. When this happens, the instructor and instructor supervisor recommends the airman be reclassified into another AFSC or separated from the Air Force.

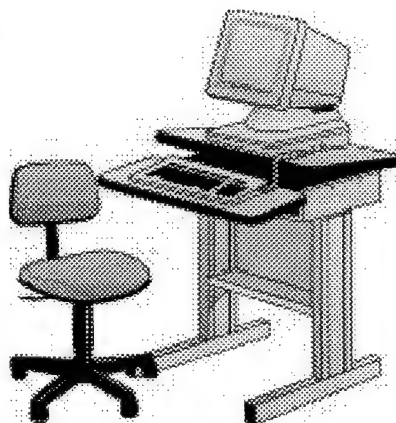
"Sir, what will I be working on at my next base?" Instructors are always asked this question. With a career field as expansive as ours, this question is difficult if not impossible to answer. By emphasizing the warrior aspect of our profession, how we directly support and defend the Constitution of the United States of America, we provide our students an understanding of the importance of each communications and information system they will maintain and/or operate.

My 16 years of experience in communications-electronics maintenance, working on everything from World War II vintage radar to leading edge technology graphics processors, provides me a wealth of "war stories" to inspire and motivate my students. The cadre of instructors in our course has more than 400 years of combined communications-electronics experience. The passing of this knowledge and experience from yesterday's and today's technicians to the technician of tomorrow keeps alive the traditions, the honor and the superiority of the United States Air Force.

As an instructor or instructor supervisor you have direct contact with every future technician. You mold, influence, motivate, and inspire every student to achieve his or her highest potential. Would you want this airman to work for you? That's the question we ask ourselves every day. The future of our great nation and our Air Force is in the hands of our graduates.

Are you interested in being an instructor? Is it a challenging job? Is it rewarding? Is it worth it? The answer to the first question is up to you. In my opinion, the answers to the other questions are yes, yes, and YES! If you are interested in a challenge, pushing yourself to achieve new goals and influencing hundreds of airmen a year, then becoming an instructor is for you.

Check the Equal Plus listing on the assignments web page or call your technical training schoolhouse. We're always looking for highly qualified, highly motivated professionals at Keesler to lead the expansive communications and information career fields into the new millennium.



Me, a training instructor?

By Master Sgt. Terrell Thomas
Keesler AFB, Miss.

Nearly 15 years ago, I was a high school graduate with no clue of what was next for me. I knew enrolling in college at the time wasn't feasible, so I figured I'd give the Air Force a try since my father had served proudly, and retired. I entered the world of radio operations at Keesler AFB and after six PCS moves and numerous TDYs, I'm right back where it all started.

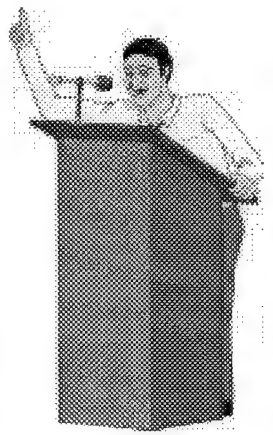
In mid 1997, I was enjoying my tour as assistant NCOIC, Radio Systems, 612th Air Communications Squadron in Tucson, Ariz., when I received the assignment notification. I was shocked partly because I hadn't planned on leaving any time soon and because I never contemplated being an instructor. Besides, I thought, "Aren't there requirements that must be met first?"

A day or so passed when the reality of me being an instructor finally set in, so you can probably imagine the natural anxieties I experienced. My biggest fear was figuring out how I would transition from the operational world into a technical training environment. I kept wondering if I'd be able to teach what I'd actually learned as a radio operator for so many years. I wondered if I was ready for the challenge.

While travelling to my new duty assignment, I was somewhat uneasy about the social change the city had made with its addition of the casinos. I thought the "fast life" had overtaken what was an otherwise serene lifestyle. I wasn't sure what my family and I were in for. I soon realized it was as serene as I'd left

it years before. I was finally ready to take on my new challenge as an instructor.

The process was very easy. I first had to attend the Basic Instructor Course, a five-week course designed to take people with no formal instructing background and equip them with tools and skills necessary to face the rigors of military teaching. In my five weeks, I was, metaphorically speaking, transformed from an individual, who when faced with the task of briefing or standing in front of large groups, was a nervous wreck, to an instructor eager to get behind the podium and educate our future leaders.



After conducting several classroom lecture/discussion presentations, I was able to overcome my fear of public speaking. I also learned invaluable counseling skills and lesson plan development and even gained an appreciation for all those instructors who taught me previously. After completing 160 hours of classroom instruction I graduated and was presented the Air Education and Training Command instructor badge. I was now ready to put my new skills to use.

After two years of teaching in the Radio Systems Communications Apprentice Course, I can truly say that I've been honored with the task of training the Air Force's future leaders. It makes me proud knowing I got the opportunity to influence the lives of our newest radio operators.

With that, I feel it's vitally important to employ highly skilled and motivated communicators to join us in training the next generation of communicators. Yes, you too can become a training instructor.

Instructor duty: A perspective

By Staff Sgt. Ronald Tyler
*335th Training Squadron
Keesler AFB, Miss.*

I was thrilled when I received my assignment to Keesler Air Force Base as an instructor. For me, being an instructor offered me the opportunity to have an impact on future leaders in the Information Management career field and I especially looked forward to my role in accomplishing the Air Force mission.

As an instructor I've learned that each student offers different challenges and my experiences over the years have taught me to meet those challenges head on.

For myself, the rewards of being an instructor are two-fold. First, I greatly enjoy seeing students arrive, not knowing anything about our career field and leaving with a solid background in Information Management. They leave knowing that our career field has a great impact on all operations in the Air Force.

Second, I personally gained a respect for the training environment. As an instructor, not only do you teach the required material to your students, but you have to be a role model, counselor, and a good listener.

From these rewards, comes the great pride and respect for what I am—an Air Force Instructor.

Keesler AFB is the place for you

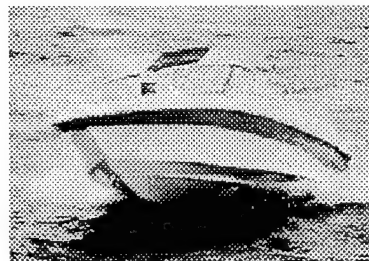
By Capt. Marsha Lafayette
335th Training Squadron
Keesler Air Force Base, Miss.

If you've ever considered an assignment based on duty and location, Keesler Air Force Base is the place for you! Located in Biloxi, Miss., Keesler AFB is on the sandy shores of the beautiful Gulf of Mexico. In Biloxi and surrounding areas, you'll experience a place rich in culture and history, an exciting social scene, and a wonderful place to raise a family.

For those with an affinity for culture and history, Biloxi stands as one of the oldest cities in the United States and the oldest French settlement in the Mississippi Valley. Its historically rich past is found in its myriad attractions, which include the Beauvoir, the last home of Jefferson Davis, President of the Confederacy; the 138-year-old Biloxi Lighthouse; Fort Massachusetts on Ship Island; and the oldest hotel on the coast, the Magnolia Hotel, which is now home to the Mardi Gras Museum.

If you're looking for fun and adventure after a long hard week at work check out the social scene; it's filled with plenty of festivals, parades, and fishing rodeos galore. Whatever the season, there's always something to do. You can join the natives as they celebrate Mardi Gras and the Blessing of the Fleet festivals, or stop in at any of Biloxi's dozens of attractions.

If you're interested in games of chance, the Mississippi Gulf Coast is home to 13 casinos featuring non-stop action 24 hours a day, seven days a week. It



Boating

has become so popular that Mississippi is now recognized as the nation's third largest gaming jurisdiction after Las Vegas and Atlantic City.

If gambling isn't your favorite pastime, enjoy dinner at one of the many buffets, cafes or fine dining restaurants, or catch a live Las-Vegas style show complete with dancers, magicians or music entertainers. The Mississippi Gulf Coast gaming scene offers something



Beauvoir

Catch one of the big venue shows at the Gulf Coast Coliseum offering everything in entertainment from country music and rock and roll concerts, to ice hockey, classic car shows and even wrestling. If you feel like getting away instead, take a quick drive over to Mobile, Ala. or New Orleans, La., they're both just minutes away.

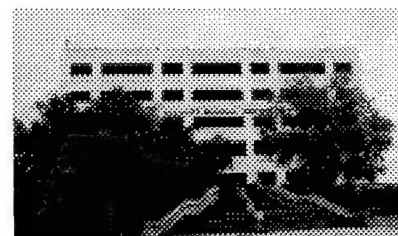
Plan on living off base? You'll find excellent schools, hospitals, and housing communities that make Biloxi and its surrounding cities an attractive place for potential residents as well as guests to live. You'll find that the relationship between the civilian and military community in nearby Gulfport is among the best anywhere in the United States. In nearby Ocean Springs, you'll find a community with an educational system that cultivates the developing minds of youth. In fact, their public school system consistently ranks in the top five for the entire state. You'll also find excellent housing communities with amenities the entire family can enjoy.

Concerned about medical facilities? Keesler AFB is home to the second largest medical facility in the Air Force offering a wide variety of specialized treatment. With more than 56,000 beneficiaries, the Keesler Medical Center is continually expanding its research program, which features a multi-million dollar clinical research laboratory and more than 15 separate investigations. They are probing such pressing areas as cancer, heart disease, diabetes, allergy, infectious disease and combat casualty care.

As you can see, the Mississippi Gulf Coast is an ideal place to raise a family and Keesler AFB is an excellent choice for assignment and duty location. So good in fact that more and more military personnel are returning to make the Gulf Coast their permanent homes after completing their tours of duty.

for everyone. In fact, many cater to families and offer family entertainment centers, supervised child care, arcades and specialty shops.

Want more entertainment?



Keesler Medical Center

Airman first 'certified' WGM at Nellis

NELLIS AIR FORCE BASE, Nev. — An information manager at Nellis AFB has a reputation for being able to fix just about any computer problem. He found his niche when increasing dependence on computers, software and networks for day-to-day operations translated into new roles and responsibilities for information managers.

Airman 1st Class Jeff Tompkins, of the 57th Wing, is the first "certified" workgroup manager at Nellis. He received his certification May 11 from Lt. Col. Gregory Brundidge, Chief, Network Systems, Headquarters Air Combat Command directorate of Communications and Information Systems.

Tompkins has a modest home computer system and was known for his ability to tinker with computers. When information managers were briefed on the new roles for workgroup management, Tompkins knew this is what he wanted to do. In September 1998 he attended his first formalized training, workgroup administration. "I was hooked and wanted to learn more!" he said.

Information managers' duties now include desktop and network applications, such as the use of web pages and management of their development. Duties also include basic hardware and software installation, configuration management and first-level initial problem-solving.

To prepare information managers for new responsibilities, the Air Force incorporated workgroup administration training into the 3- and 7-level technical schools at Keesler AFB, Miss., and the new career development courses for information managers. The next level is called Workgroup Management and includes more in-depth training on automated tools and processes in the modern office environment.

In February the Nellis Workgroup Management Program Office released ACC's Computer Based Training disk. Tompkins wanted to learn as much as he could as fast as he could.

"Almost overnight Airman Tompkins completed more than 20 CBTs and wanted to know when the first workgroup management class would be taught; we had trouble keeping up with him," said Senior Master Sgt. Wayne Barron, Workgroup Management Program Office superintendent. "He pushed us to develop our Phase II and III classes about three months ahead of schedule."

"I wanted to learn as much as I could and the material is easy to understand," said Tompkins. "I just started completing CBTs and it was fun."

Tompkins completed many of his CBTs at home and on the weekends and by April 12 he had completed all



Airman 1st Class Jeff Tompkins, left, at work in the workgroup manager class.

eight blocks of his CBT training, with an average score of 94 percent.

He also completed Phases I, II, and III of Nellis' Workgroup Management training program. Phase III training is a two-week apprenticeship with the Base Network Control Center. While working with the NCC, Tompkins fielded help desk calls, established user accounts, and helped NCC technicians by going out on service calls. He was the first workgroup manager at Nellis to complete the two-week apprenticeship program.

The airman has applied the principles of workgroup management to his primary duties. He designed and developed a web page where authorized users can download his division's primary tactical doctrine document, the Air Force Tactics, Techniques, and Procedures Tactical Doctrine. He is responsible for its distribution to more than 2,000 units worldwide. The result of converting this paper-based product to an electronic process earned his division ACC's 1998 Chief of Staff Team Excellence Award and representation at the Air Force Association's Air Power Symposium in Washington, D.C., last year.

Tompkins now spends most of his days troubleshooting computer problems. "Airman Tompkins is the most talented workgroup manager I've had the pleasure to work with and teach," said Barron. As for Tompkins, success comes with a little hard work and a desire to learn. His goal is to attain his Microsoft Certificate of Engineering, Workgroup Management.

Air Force continues evaluating its operational mission for Y2K

By Capt. Wilson Camelo
Air Combat Command Public Affairs

NELLIS AIR FORCE BASE, Nev. (AFPN) — Just one week after helping prove that air power alone can make a significant difference in helping bring peace in a major conflict, the Air Force is ensuring it can have the same success in 2000 and beyond.

The way the Air Force is doing that is with a three-phased operational assessment called Y2K Flag. The Y2K Flag assessment will also help the command comply with a congressional mandate to operationally evaluate all mission-critical systems — those expected to be needed in a major theater war scenario — in at least two exercises.

The assessment's major execution phase took place here June 14-17, during the mission employment phase of the Air Force Weapons School. The conclusion? The Air Force can have more confidence that it will fly, fight and win in 2000 and beyond, according to Lt. Col. P.J. Avella, Air Combat Command Y2K operational assessments manager.

"We're on track with the assessments and I'm pleasantly delighted things are working as well as they are," he said. "The only way our aircrews will know we're in the next millennium is to look at the calendar on the wall."

The Y2K Flag portion conducted here involved integrating intelligence, surveillance and reconnaissance "sensor" aircraft with bomber and fighter "shooter" aircraft and combat search and rescue to assess the sensor-to-shooter chain necessary to carry out a major theater war in 2000.

More than 45 aircraft flew approximately 120 Y2K-related sorties over the Nellis Air Force Base, Nev., ranges. The assessment also included Air National Guard and Reserve units, as well as an Army ground control unit from Fort Erwin, Calif.

The director of the Air Force Y2K office, Brig. Gen. Gary Ambrose, visited June 15 to observe the operational assessments here and said he was pleased with what he saw.

"The way we're assessing our operations for Y2K is a success story. By leveraging Y2K assessments into already scheduled exercises, we're getting a major bang for the buck," he said.



Photo by Senior Master Sgt. Derek Harris

An F-16 from Mountain Home Air Force Base, Idaho, fires a HARM missile as part of the Y2K Flag operational assessments at Hill AFB, Utah.

In May, ACC conducted an execution phase at Hill AFB, Utah, during a previously scheduled air-to-ground weapon system evaluation program exercise. During this exercise, various aircraft dropped bombs and shot missiles equipped with telemetry kits to provide detailed data of weapon system employment in a Y2K environment. ACC conducted a similar exercise at Tyndall AFB, Fla., at the same time, to assess air-to-air missiles.

WSEPs are annual events in which aircrews are able to train with live munitions.

So far, there are only two minor and easily correctable glitches attributable to Y2K that have been found during the Y2K Flag assessments, said Avella.

The first was found in an anti-jam radio used in various aircraft. Avella said that discrepancy was already known and the assessment at Hill only reaffirmed the glitch. The second was in the mission planning system display on the EC-130.

In each case, the system involved didn't automatically roll over its date from Feb. 28 to Feb. 29, 2000. However, the systems still worked and the fix involved manually inserting the Feb. 29 date, said Avella.

Other phases of the Y2K Flag are assessing campaign planning and tasking in air operations centers, and command and control planning and execution of Air Force missions in 2000.

(Courtesy of ACC News Service)

RETGO conference attendees receive comm and info update

ANDREWS AFB, Md. --

Nearly 50 retired general officers and senior active duty communications and information people exchanged ideas at the annual Retired General Officer Conference April 27-28, hosted by Lt. Gen. William Donahue at Andrews Air Force Base, Md.

The attendees were presented with briefings and updates on various areas of interest to the comm and info community. The theme this year focused on the communications and information contribution to the expeditionary Air Force concept. Topics included Air Force current operations, Y2K efforts, Combat Air Force update, space and information operations update, and human resource issues.

The Joint Chiefs of Staff/J6, Lt. Gen. John Woodward Jr., the Commander of the Computer Network Defense JTF, Maj. Gen. John Campbell, and the Defense Information Systems Agency/D6, Brig. Gen. Gary Salisbury, also briefed the attendees on comm and info issues in their organizations. The Air Force Communications Agency historians set up a Berlin Airlift 50th Anniversary display booth that highlighted the communications contribution to the historic airlift.

The highlight was the presentation of the first Air Force Communications and Informa-

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Photo by Master Sgt. Val Gempis

Tech. Sgt. Michael Amposta, 613th Air Communications Squadron, Andersen AFB, Guam, provides communication links from Earth terminals to satellite stations in space to support the Air Operations Center and deputy Combined Forces Air Component commander during the Cobra Gold '99 exercise at Korat Air Base, Thailand.

Communications vital link for Cobra Gold

By Master Sgt. Val Gempis
Air Force Print News

KORAT AIR BASE, Thailand

— Today's command and control of aerospace warfare is conducted by warfighters sitting behind command, control, communications, computer and intelligence systems that enable them to direct, with a push of a button, the unleashing of aerospace weapons of destruction on enemy forces.

Smart bombs, precision guided missiles, stealth fighters and stealth bombers are just some of the terms airmen have become familiar with. But there is one element that is vital to the modern warfighting machinery that airmen don't normally hear about: communications.

"It would be awfully difficult to start and conduct a war without it," according to Lt. Col. Don Solano, commander of the 613th Air Communications Squadron at Andersen Air Force Base, Guam, and director

of C4I support for Cobra Gold '99.

"Our mission during Cobra Gold '99 is to set up, operate and maintain tactical C4I systems to support the Combined Air Operations Center," says Solano. "Without adequate C4I systems, it would be very difficult for the warfighters to execute their mission."

With a team of 60 people toiling in the tropical heat and rain of Thailand, the 613th has been extremely busy, frequently working 16-hour days to get its customers wired and ready for action. Throughout the entire exercise its workplace always resembles a beehive.

"It's a very complex operation. The CAOC is the brains for aerospace projection. We're the C4I support, the backbone they can build on. They are the aerospace force multipliers, we're the aerospace force enabler," Solano added.

Some of the services they are

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A Stroke of Genius!

*A showcase of
Communications
and Information
Best Practices*

**Process captures base's long haul
communications costs, finds
ways to reduce it**

AFSPC's C4 Cost of Business process becomes 1st AF-level best practice

By Capt. Rick Sobottka
*Chief, Air Force Space Command
Network Operations and Security Center
Peterson AFB, Colo.*

Air Force Space Command's submission of a Best Practice called the C4 Cost of Business became the first Air Force level Best Practice for Communications and Information. All previous best practices submitted to Air Force Communications Agency were instituted at the major command level.

The C4 Cost of Business started as a C4 Sufficiency Study under then AFSPC/SC, Maj. Gen. William Donahue. Under his successor, Maj. Gen. Jack Woodward, the process evolved further and became the C4 Cost of Business study.

The primary objective is to capture the total cost of doing long haul communications business at a base and find ways to reduce the cost. As a by-product, many local communication cost issues are also addressed. The process helps bases determine real need for circuits and often finds many unused circuits or leased equipment components, which have monthly recurring charges. End users are verified and requirements validated. Double billings for circuits are also identified.

The process helps identify who's paying for circuits by the Program Designator Code and considers such

things as the possibility of aggregating circuits to reduce costs. A formal report at the end of the study provides the commander a picture of how much total bandwidth the base has, its cost, what modes of communications are used, and suggestions on how to improve the overall cost and communications posture.

Long haul communications are paid for by the MAJCOM or, in the case of common user circuits, by AFCA, not the base. Therefore, the MAJCOMs and AFCA have the largest stake in this process.

Recognizing the MAJCOM's stake, AFSPC created a team to execute the C4 Cost of Business process. The AFSPC Communications Support Squadron's Wide Area Network Flight was made lead and then partnered with a support contractor who had years of expertise in the long haul communications business, Computer Science Corporation.

Seeing a void in the way to track many of the R&R inconsistencies, CSC developed a combination of tools using Microsoft Access which has become known as Multi-tool. It manipulates the Defense Information System Database to quickly identify errors and grab low hanging fruit for immediate return of equity. It has a cost calculator for quickly determining proposed circuit costs using published rates from the Defense In

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July 1999

Keesler tests show AF ready for Y2K

KEESLER AIR FORCE BASE, Miss. – The results are in. When Keesler AFB pushed its clocks forward to look at life in a Year 2000 environment on May 11-12, the results showed that the Air Force will operate business as usual in the year 2000.

Y2K officials from the Air Force Communications Agency from Scott AFB, Ill., turned the clocks forward on Keesler computer systems for the only base-wide Y2K test in the Air Force. The tests covered communications infrastructure, facilities infrastructure, standard systems, and MAJCOM-specific systems. Functionals from communications and information, medical, civil engineering, logistics, transportation, finance, security forces, services, contracting, personnel, and training all participated in the test.

The 81st Training Wing, host unit on Keesler, was the base lead for the test, but the 403rd Reserve Wing and the 738th Engineering Installation Squadron were key to the

test. The Standard Systems Group and AF Operational Test and Evaluation Center also lent their expertise.

More than 30 critical systems were tested, including automated information systems such as logistics, security forces, finance, medical, personnel, civil engineering, contracting, training, and services.

Base infrastructure systems included all base data and voice networks, the base network control center, the base's information protection and network management systems, 911 emergency system, telephone switches, video teleconferencing, pager systems, traffic lights, el-



A1C Carlos Garcia, 81st Comptroller Squadron, right, pays A1C Timothy Hall during the Integrated Paying & Collecting System Test portion of the Y2K test.

evators, fire and security alarms, and heating and air conditioning systems, and more.

Col. Mike Marro, deputy director of the Air Force's Y2K Office in Washington, D.C., said, "Keesler

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formation Technology Contracting Office.

The team recaptures equity by getting refunds on circuits for which disconnect paperwork was submitted. Many of these steps are done before the team arrives at the base. The team combines information from DISD, along with local circuit information and outstanding transaction information from the Telecommunications Service Request Editor, to populate the C4 COB database, which provides the "big picture".

The base level visit allows the team to partner with people who work the day-to-day communication issues, the tech controllers and commercial communications personnel. Together they look into the circuit line records and commercial communications records to help populate the circuit histories if data is missing. They validate circuits and users, if needed, they show people how to access the Telecommunication Certification Office Support System which AFCA provides via the WWW, and they show them how to use Multi-tool. If needed, the team helps initiate Feeder Requests for Service, and follows up with MAJCOM, AFCA and DISA personnel to resolve inconsistencies.

In spring 1998, the Air Force Audit Agency, on be-

half of the DOD Inspector General, was tasked to audit long haul communications in the Colorado Springs area. The C4 COB team provided the AFAA an overview of the process and then helped them with all the AFSPC bases to be audited. The audit team was so impressed by the C4 Cost of Business process they asked for assistance in reviewing the long haul communications at Fort Carson and the Air Force Academy. This ultimately led to a DOD IG report which recommended the C4 COB process, or something similar, be made a Best Practice for the Air Force and perhaps even be considered for DOD-wide application. AFCA then asked AMC if the process could be further validated on Scott AFB. The study was conducted in February and March with good results. An all-MAJCOM training and information session was held in March so other MAJCOMs could consider using the Best Practice, make changes to their existing MAJCOM process, or make arrangements to have CSC or other support contractors assist them.

The overall annualized savings (cost avoidance) since FY97 has amounted to some \$2.27 million, while the cost of the contractor during that time has been around \$997,000. An additional \$1.2 million in actions, which will realize even greater returns. More information and tools can be found on the AFCA Best Practices Home Page http://www.afca.scott.af.mil/best_practices

JEFX '99 begins in August

HAMPTON, Va. (AFPN) — The two-week Joint Expeditionary Force Experiment begins in August at locations nationwide, despite the increased operations tempo caused by recent operations in Europe.

JEFX '99 examines ways to mature command and control procedures at the tactical or wing level using two air expeditionary forces as the basis of the experiment. It will also increase joint and coalition forces participation and will more fully integrate space-based and space-derived information into aerospace operations center operations.

"We've minimized the impact of real-world operations tempo, have kept the experiment on track, and the objectives and initiatives intact," said Col. Stephen Carr, vice commander of the Aerospace Command and Control Training and Innovation Group at Hurlburt Field, Fla.

"From our perspective, we have a clear way ahead at this point for a successful experiment in August."

Though the full-scale experiment will continue as planned, changes had to be made to the overall experiment schedule because of competing demands on Air Force people and equipment. Communications equipment and manning were the biggest challenges for experiment planners.

"Our communications people had to go out and purchase additional communications equipment that was not available to us because of the (Kosovo) deployments," Carr said. "We've been able to fill that gap pretty effectively."

Instead of a fully manned aerospace operations center to test the experiment, only a minimal amount of operators will be available for the systems and communications con-

nectivity check, called Spiral 3.

"We decided to add a week to the beginning of the execution phase for additional training and scenario work rather than bring the (command and control) operators in for Spiral 3, scheduled in July," Carr said.

The two-week execution phase of the experiment is scheduled to begin Aug. 18 at various locations worldwide.

For more information about the experiment, write the Air Force Experimentation Office at:

Air Force Experimentation Office
2101 Executive Drive, Suite 5I
Hampton, VA 23665; 757-825-8234
(FAX) 757-825-6214; DSN 574-9945
(FAX) 574-9945 x400

The Web site is available at:
<http://afeo.langley.af.mil> (Courtesy of Air Combat Command News Service)

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tion Hall of Fame Award at the RETGO Dinner. This award recognizes those who have made significant contributions to the comm and info community while serving the public and private sectors.

"There were many heroes in the room, all deserving of this award. As pioneers in the communications field, their leadership and unselfish service to the nation and the communications and information community leave a great legacy," said General Donahue.

Before presenting the award, General Donahue said, "This first Hall of Fame award goes to a man who has had more influence on more people in the comm and info community than any other," he added. "He is a leader who has paved the way for many of us through mentoring, challenging job opportunities, unusual insights, extraordinary foresight and a genuine concern for his Air Force and the people who serve. He today, as much as ever, gives his time and counsel to the service of this great nation and the good of the Air Force. He is the father of modern command, control, computers and communications and the patriarch of our community."

The first recipient of the Air Force Communications and Information Hall of Fame Award went to Lt. Gen.



Lt. Gen. William Donahue, right, Air Force Communications and Information Center commander, presents retired Lt. Gen. Lee Paschall with the Hall of Fame Award at the RETGO conference at Andrews AFB, Md.

Lee Paschall. His wife, Bonnie, was also honored. General Donahue said, "Those who have had the privilege and honor of knowing General Paschall know that you get a complete package—you get a twosome."

General Donahue thanked all of the retired general officers and their families for their service, leadership and participation in the RETGO conference.

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AFB operated in the Year 2000 with no significant problems. It confirms what we expected—our systems, our bases and our missions will function effectively in the Year 2000.”

The rollover had no adverse mission impacts and did not affect the critical functions of any systems. The tests uncovered some date-related errors, easily fixed, according to AFCA Y2K experts. Offices affected by the test went to work right away to resolve the problems.

Some of the minor Y2K anomalies identified are listed below:

The Keesler AFB Telephone Switch billing system, UCALL32, which will be replaced with the Telephone Management System, did not process the year 2000 correctly. Although the system's operation was not affected, it did put incorrect date and time stamps on phone calls. Other bases are being checked for similar products.

After the year 2000, the Cable Assignment Information Retrieval System (CAIRS) issued every trouble ticket with the same number. After contacting a vendor representative, the company issued a patch the same day. This patch was

automatically downloaded to other users.

The Tactical Air Navigation system, AN/FRN-45, would not accept dates after Jan. 1, 2000. The date, however, is not used for system operation and the TACAN's operation wasn't affected. It was decided that the system could continue to operate in the year 2000 without modification.

Although patient care was not affected, when systems were advanced into the Y2K test environment, the master computer for the Nurse Call System reverted to Feb. 14, 1992. The individual monitoring systems rolled forward and displayed the year 2000 date. When attempting to set the date on the individual systems, no date before 1992 or after 1999 was accepted. The result, in every case, was a default to Feb. 14, 1992. Aside from the incorrect date display, there was no error or malfunction. All patient call tests were received at the monitors. The vendor is working to fix the problem and the AF/SG community is checking other hospitals for similar issues.

On an elevator display, the month and day advanced, but the year did not. The date was then entered manually to reflect the year

2000. The system also didn't register the leap year rollover to March and instead stayed in February 2000. The incorrect date rollover did not affect the functions of the elevator.

An optional graphical display on the SONICS Security Alarm, used at about 50 military bases, failed the test, however, the basic alarm system continued to work and successfully passed the Y2K testing. The display, which operates on a separate computer and is used to pinpoint where in a building an alarm was activated, did not function as expected at the Dec. 31, 1999 rollover date. Base civil engineering coordinated with security forces and the software manufacturer to install a software patch for the system. This upgrade kit will be available to all users by mid-June. After the upgrade, the system worked normally.

The Air Force's Y2K efforts are being carried out by AFCA at Scott AFB and the Air Force Y2K office in Washington, D.C. Program offices at each major command, field operating agency, and direct reporting unit work closely with these staffs.

“The bottom line is the Air Force is going to be 100 percent mission ready Jan. 1, 2000,” said Marro.

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providing are tactical support for theater battle management systems; air tasking order generation, production and dissemination; satellite communications; message center; secure and nonsecure Internet, e-mail and Web access; power production and air conditioning; C4I tactical systems control; technical control; secure and nonsecure telephone systems; deployable computer networks; frequency management; mobility processing; and tactical C4I systems planning and engineering.

Aside from ensuring that warfighters can carry on with their mission, joint and combined training is a critically important aspect of this exercise, according to Solano.

“One of our goals is to achieve successful training with our Thai- and U.S.-joint counterparts,” he said. “We try to incorporate them with our daily activities. We attempt to better understand what they do and how they do it so we could tie them in with our communications infrastructure.

“We're training to do this for real-world contingen-



Photo by Master Sgt. Val Gempis

Staff Sgt. Steve Cole, telephone switch operator from the 613th Air Communications Squadron, Andersen Air Force Base, Guam, works on automatic digital switchboard equipment during Cobra Gold '99.

cies. And we're an absolutely essential ingredient to make this exercise a true success. Our motto: Warzone Wide-Combat Capable!”



July 1999